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THE CRIMINAL'S IMAGE OF THE CITY

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DEDICATION

To Kathy and Chris . . .

and Those Men Who Bring Us Spatial Patterns of Crime

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THE CRIMINAL'S IMAGE OF THE CITY

CHAPTER I

INTRODUCTION

Who knows what evil lurks in the hearts of men?
The Shadow does . . .

This famous line from the old radio serial "The Shadow" illustrates that evil and its manifestations are issues of vital concern to practically everyone. Unfortunately, to the chagrin of those concerned with crime prevention, the Shadow is the only one who does know that evil lurks there. One way in which the evil of men is perpetrated on other men is through the forceful or surreptitious taking of their belongings. This endeavor was conceptualized in an effort to better understand and hopefully prevent this phenomenon.

The Problem

The basic problem of this research is to determine if the criminal's spatial patterns of property crime within Oklahoma City are related to his environmental image of the city.¹ Two considerations are

¹ Throughout this research the word "criminal" will connote "property criminal" unless otherwise indicated.

explicit in this problem. First, criminal activity varies systematically from place to place resulting in spatial patterns of both intensity and type of crime. And second, the individual possesses a generalized mental picture or image of his physical and social milieu. The principal proposition of this study then is that there exists more than a random association between these two spatial variations. A secondary question which is an integral part of the first concerns the uniformity of environmental images held by both the criminal and non-criminal elements of the city. As Gans suggests, all citizens of the urban area do not share a common environmental image and substantive differences in images exist which are dependent upon previous behavior paths.² If true, it follows that the criminal and non-criminal elements should have different images of the same areas of a city.

Images and Behavior

The particular nexus discussed above is based on the premise that environmental images are believed to exert an influence on human behavior. Spatial behavior and spatial images, however, are not independent, for behavior influences one's image of a place. The author recognizes the existence and importance of this symmetry. According to Piaget the adult's representation of space results from his movement (behavior) in the environment rather than from his perceptual "copying"

²Herbert Gans, People and Plans (New York: Basic Books, 1968).

of the environment.³ To Prokopi purposeful mobility (behavior) in a city is a result of one's image of the city.⁴ Carr and Schissler have combined the effects of both in saying that the individual's actions are based upon his image of the city and his experience in similar environments.⁵ That a direct causal relationship cannot be established is suggested also by Lynch in his classic work The Image of the City.⁶ He says

. . . environmental images are the result of a two way process between the observer and his environment. The environment suggests distinctions and relations and the observer--with great adaptability and in light of his own purposes--selects, organizes, and endows with meaning what he sees. The image so developed now limits and emphasizes what is seen, while the image itself is being tested against the filtered perceptual input in a constant interacting process.⁷

This two-way interacting system is incorporated in the "simple behavior system"⁸ environment, rather than being a passive agent, is dynamic and changing--continually reacting to the actor's behavior. In

³Jean Piaget and Barbel Inhelder, The Child's Conception of Space (New York: W. W. Norton and Co., Inc., 1967).

⁴Dieter Prokopi, "Image and Functions of the City," Urban Core and Inner City, Proceedings of the International Study Week, E. J. Barth (ed) (Amsterdam: Leiden, 1967).

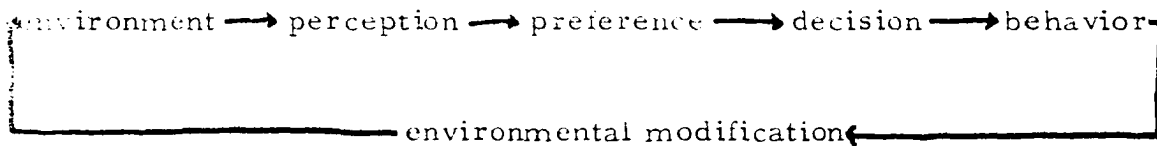
⁵Stephen Carr and Dale Schissler, "The City as a Trip: Perceptual Selection and Memory on the View from the Road," Environment and Behavior, 1 (1969), 33.

⁶Kevin Lynch, The Image of the City (Cambridge: MIT Press, 1960).

⁷Ibid., p. 6.

⁸P. G. Herbst, "A Theory of Simple Behavior Systems," Human Relations, XIV (1961), 7-94, 193-240; D. J. Walmsley, "The Simple Behavior System: An Appraisal and an Elaboration," Geografiska Annaler, 55B (1973), 49-56.

simple terms, the system and the order of influence assumed in this study, can be conceptualized as follows:



Using this framework, the present study considers the criminal's perceptions of city space and its relationship to recorded behavior--criminal patterns.

Resolution Level

Images of spatial phenomena are multi-scale. This study focuses on what has been termed the general resolution level. Although perception ranges in scale from the world to the most micro scale, for example, site characteristics of property crime locations, most geographers tend to work at a regional level. Harvey, defining the domain of most geographic thought, suggests a regional resolution level in stating: "Any phenomena [sic] that exhibits significant variation at that resolution level is likely to be the subject of investigation by the geographer."⁹ Regions, which are areas possessing internal homogeneity with regard to some characteristic (e.g., type and intensity of crime) also range in size from the world to the micro scale. This study focuses

⁹David Harvey, Explanation in Geography (London: Edward Arnold, 1969), p. 485.

on intra-urban regional crime patterns within one city.

Significance of Crime

Crime and its punitive counterpart, law and order, have become major domestic issues in this and other countries. Statistics reinforce the preoccupation. Table following table display the frightening numerics of this form of behavior. All that the facts indicate, however, is that more people steal than murder and that considerably more people overindulge in alcohol than overindulge in rape. Absolute crime figures or even crime rates have little meaning for the average person. Moreover, they do not bring us any closer to understanding spatial variations in this form of behavior. Displaced from the geographic context they do not show the spatial inequalities which affect the day-to-day lives of individuals.

Statistical statements comparing places give meaning to these inequalities and reflect the differential character of the quality of life in our country and our cities. It is possible that in terms of crime the same situation may develop as when the nation became conscious of poverty in its midst. Just as the very affluence of the nation made "poverty in pockets" that much more intolerable, "pockets of crime" become intolerable as the standards of society go up as a whole or as the pockets expand to larger regions. This is particularly true for those who are in these pockets.¹⁰ As the variation in wealth becomes greater

¹⁰ Albert D. Biderman, et. al., Report on a Pilot Study in the

some of those who do not share in this wealth become frustrated and alienated. Some even turn to crime as a coping mechanism. The existing patterns of crime, therefore, represent the price we pay for structuring society as we have structured it.¹¹ As this gap between the ideal and the real in American life widens, the price increases significantly.

Spatial Perspective

Social scientists, including geographers, attempt explanations of these phenomena in hopes of discovering cause-effect relationships. The geographer, however, analyzes the spatial association of these societal processes with the view that the spatial perspective provides a good analytical framework for analyzing social patterns and processes within a complex milieu such as our urban environment. This spatial perspective offers a broader based approach than most. For example, Harvey states: "Human geographers have long recognized that geographical patterns are the end product of a large number of individual decisions made at different times for often very different reasons and that it was necessary to employ some psychological notions in explaining

District of Columbia on Victimization and Attitudes Toward Law Enforcement, President's Commission on Law Enforcement and Administration of Justice, Field Survey Number 1. (Washington, D.C.: Bureau of Social Science Research, Inc., 1967), p. 174.

¹¹ E. M. Schure, Our Criminal Society (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1969), p. 24.

these patterns."¹² Sociological postulates have also been used in geographical diffusion studies by Hägerstrand.¹³ The analytical procedures of psychology and sociology are, however, but two of the disciplines from which the geographer draws material. One of the major differentiating characteristics of the geographical method is the contention that the areal unit is a valid organizing structure in studying human variables. The effectiveness of this approach can best be grasped when it is realized that areal units such as neighborhood, cities, states, and nations are an integral part of society and have substantial influence on human behavior. The criminal's image of these areal units is a fundamental part of this study.

Spatial Perspective on Crime

Most current work on crime patterns by geographers has been associated with the ecological interpretation of criminal behavior. The ecological perspective to urban sociology as developed by the Chicago school views human behavior as a normative response to social forces, such as population densities, housing characteristics, and ethnic groups which are present at certain locations within the urban milieu. Several sociologists have revealed important geographical patterns in crime

¹²David Harvey, "Theoretical Concepts and the Analysis of Land Use Patterns," Annals, Association of American Geographers, 56 (1966), 370.

¹³T. Hägerstrand, "The Propagation of Innovation Waves," Land Studies in Geography, Series B, Human Geography, 4 (1952).

rates and types which corresponded with variables that signify low socio-economic status.¹⁴ For analysis they have utilized aggregate data at the census tract level.

Previous studies by geographers have also employed aggregate census data to analyze spatial patterns at several scales of analysis. At the intra-urban scale they have followed the lead of the sociologists in correlating indices of social status and crime, but have placed more emphasis on distance as an explanatory variable.¹⁵ At the inter-urban scale Harries has compared the analyses of sociologists Lottier and Shannon to data for 1968.¹⁶

¹⁴ Clifford R. Shaw and Henry D. McKay, Juvenile Delinquency and Urban Areas (Chicago: University of Chicago Press, 1942); B. Lander, Towards an Understanding of Juvenile Delinquency: A Study of 8,464 Cases of Juvenile Delinquency in Baltimore (New York: Columbia University Press, 1954); C. F. Schmid, "Urban Crime Areas," American Sociological Review, 25 (1960), 527-42, 655-78; Karl Scheussler, "Components of Variation in City Crime Rates," Social Problems, 9 (1962), 314-23.

¹⁵ Yuk Lee and Frank Egan, "The Geography of Urban Crime: The Spatial Pattern of Serious Crime in the City of Denver," Proceedings, Association of American Geographers, 4 (1972), 59-64; George T. Downey and Richard G. Hunt, "The Spatial Structure of Intra-urban Criminal Behavior," Paper presented at the Annual Meeting, Association of American Geographers, Kansas City, April, 1972; Lloyd Haring and Marilyn Haring, "Spatial Aspects of the Behavioral Environment of Juvenile Delinquents," Paper presented at the Annual Meeting, Association of American Geographers, Kansas City, April, 1972.

¹⁶ Keith D. Harries, "The Geography of American Crime, 1968," Journal of Geography, 70, 4 (April, 1971), 204-13; Stuart Lottier, "Distribution of Criminal Offenses in Metropolitan Regions," Journal of Criminal Law, 29 (September-October, 1938), 37-50; Stuart Lottier, "Distribution of Criminal Law in Sectorial Regions," Journal of Criminal Law, 29 (September-October, 1938), 329-44; Lyle W. Shannon, "The Spatial Distribution of Criminal Offenses by State," Journal of Criminal Law, 45 (September-October, 1954), 264-73.

The spatial analyses of both geographers and sociologists, thus, share a common characteristic. They employ aggregate data and in doing so are restricted to normative assumptions concerning the nature of man. These studies, based on a generally uncritical usage of official statistics, are not theoretically productive, telling us very little about what actually causes crime patterns.

Behavioral Approach

Because we are no closer to understanding crime patterns, a need exists to shift away from such a deterministic emphasis, which seeks to explain the problem by viewing the particular location and circumstances of the individual, to a more behavioral approach. Some spatial analysts in areas other than crime have directed their concern to the intangible attributes of the individual and his situation. In other words, they are broadening the set of relevant variables to explain the behavior in question.¹⁷ Behavioral approaches, however, are not removed from the traditional scale of geographical analysis or, for that matter, traditional geographical goals. Regarding this perspective, Herbert states:

. . . A major quality of behavioral approaches in geography . . . serves to maintain their alignment with the normal scale of analysis. This is the necessity of seeking to identify

¹⁷Gunnar Olsson and Stephen Gale, "Spatial Theory and Human Behavior," Papers and Proceedings of the Regional Science Association, 21 (1968), 229-42.

aggregate characteristics, even though the individual is the initial unit of analysis; meaningful generalizations in a spatial context remain the geographical perspective.¹⁸

Olsson, advocating this approach suggests that "spatial models must be developed from knowledge of individual behavior and not as traditionally conceived the other way around."¹⁹

A principal advantage of this approach over a more deterministic emphasis concerns data reliability. In the behavioral approach the data are obtained from the individuals responsible for the spatial decisions which lead to spatial patterns. One common feature of previous geographic studies is the total dependence upon aggregate crime data which are notoriously inaccurate. The amount of crime in any given area and the amount reported to the police are two grossly different figures. This discrepancy leads to severe analytical problems.

The behavioral approach is not without its shortcomings, which are both theoretical and operational. The major weakness of the approach is that influences on behavior, such as the environmental image, are essentially probabilistic, varying with the characteristics of the individual. In this study these differences will be subjected to some degree of control, thus reducing the magnitude of the problem. Operationally, the behavioral approach is very difficult to implement because of the time and cost involved

¹⁸David Herbert, Urban Geography (New York: Praeger Publishers, 1972), p. 20.

¹⁹Gunnar Olsson, "Inference Problems in Locational Analysis," Behavioral Problems in Geography: A Symposium, ed. by Keven Cox and Reinhold Golledge, Studies in Geography No. 17 (Evanston, Illinois: Northwestern University Press, 1969), p. 14.

in data collection. As the sample size increases, the cost increases almost exponentially.

Contribution to This Study

Little is known theoretically about crime patterns despite the magnitude of literature, both scientific and journalistic, on crime. It would seem imperative, thus, to seek a better understanding of the criminal himself and his environmental image. With some insight into the criminal's spatial decision processes policy makers charged with creating or modifying urban milieux could hopefully design them in such a manner as to discourage criminal activity. Until now, no systematic effort has been made to measure the criminal's spatial perception and examine this in the context of criminal patterns. The research, thus, draws from and contributes to two well-developed bodies of theory-- environmental perception and criminal behavior systems. It is, as Morley says, "a reply to the growing feeling that geography as an environmental discipline, must function as a behavioral science and examine once more the processes which underlie man's effective responses to the qualitative and quantitative features of the natural and man-made world."²⁰ In fact one of Ackerman's requirements for placing geography on a

²⁰C. D. Morley, "Perception, Space Behavior and Urban Models, a Discussion Paper" (paper presented to the Urban Studies Group, Institute of British Geographers, Sanford, 1968), 3, cited by L. J. Wood, "Perception Studies in Geography," Transactions, Institute of British Geographers, 50 (1970), 138.

research frontier is that geographers should be prepared to choose problems in the light of the advancing frontiers of the behavioral sciences.²¹

²¹E. A. Ackerman, "Where is a Research Frontier?" Annals, Association of American Geographers, 53 (1963), 429-40.

CHAPTER II

THE CONCEPTUAL MODEL

Previous studies in the Geography of Crime have primarily considered the effects of criminal activity upon the urban milieu, or have implied or suggested factors which might have entered into the criminal's decision-making process.¹ These studies have been conducted without the benefit of information obtained from the individual responsible for these spatial decisions, the criminal. This chapter presents a conceptual framework for studying the spatial activity patterns of the property criminal via information provided by the offender himself. This model, it is hoped, will lead to a better understanding of these spatial patterns. The model, in a sense, is a general model of human behavior with criminal behavior as a special case. It represents the criminal (the actor) as a system engaging in an on-going interactive process with his environment. This environment is not merely the physical or so-called geographical environment, but also the man-made

¹Harries, "The Geography of American Crime, 1968"; Lee and Egan, "The Geography of Urban Crime: The Spatial Pattern of Serious Crime in the City of Denver"; Downey and Hunt, "The Spatial Structure of Intra-urban Criminal Behavior."

and social environments that are usually of much greater importance in human affairs.²

A basic assumption is that the environment both influences and is influenced by spatial behavior. In terms of criminal activity patterns this means that the environment, in a manner not fully understood, affects the criminal's decision-making processes regarding the locations of his actions. After the criminal commits his offenses the environment is affected. This may take several forms, two of which will be mentioned briefly. First, the actions of criminals result in spatial patterns of crime, differentiated by type and intensity, on the landscape. Second, the environment may react in some dyadic manner to this criminal activity.³ This reaction could be manifested at several levels of society ranging from policy makers adopting a strong law and order perspective, the police increasing surveillance frequencies in an area, down to the actions of individual citizens. The latter has been termed "target hardening" in which they fortify their businesses and dwellings making them less vulnerable to the criminal.⁴

²Peter Gould and Rodney White, Mental Maps (Baltimore: Penguin Books, 1972), p. 46.

³Joseph Sonnenfeld, "Social Interaction and Environmental Relationship," Environment and Behavior, 4 (1972), 267-77.

⁴Oscar Newman, Defensible Space (New York: The Macmillan Co., 1972), p. 3.

Order of Presentation

The discussion begins with the presentation of the "simple behavior system." From this general model, a model specific to criminal behavior is developed. Next, interest focuses on several theories concerning man's evaluation of his environment and how this evaluation influences his behavior. Finally, the specific associations expected from a partial implementation of the crime specific model are elaborated.

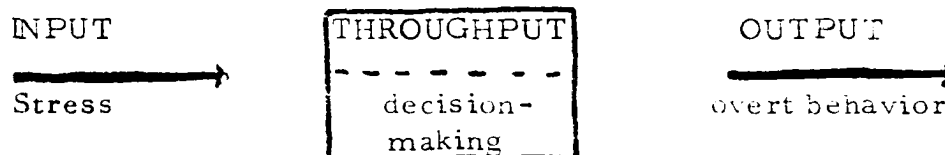
The Simple Behavior System

Models which seek to explain man-environment interaction must be general because of the complexity and variability of the relationships between the two. The conceptualization chosen as the guiding framework for this study is such a general model. At various levels it offers explanations for not only spatial behavior, but all forms of behavior as well. It has such wide-ranging applicability that most previous explanatory work in geography and the social sciences may be interfaced at some level. This model is the "simple behavior system." The model, originally formulated by Herbst, has been recently elaborated on by Walmsley.⁵ Walmsley's reformulation is emphasized in the model of criminal behavior. The basic structure of the simple behavior system is as follows.

A simple behavior system as defined by Herbst is one in which

⁵Herbst, "A Theory of Simple Behavior Systems"; Walmsley, "The Simple Behavior System: An Appraisal and an Elaboration."

all elements contribute directly to its output (in contrast to a complex behavior system that includes separate subsystems that do not contribute directly to output). The system is actor-oriented, that is, the actor is the system. Schematically, it appears as follows:



Walmsley, following Emery and Trist, has added the following to specify the nature of system-environment interaction. He states:

. . . let the suffix 1 denote the system and the suffix 2 the environment. Further, let L be some potentially lawful connection. It follows then that four types of connection can be derived in the analysis of open systems (of which Herbst's is an example):

$$L_{11} \quad L_{12} \quad L_{21} \quad L_{22}^6$$

The L_{11} connection represents the activities within the system and can be equated with "throughput." Little is known about this connection, and it may be that the decision processes which it involves are of greater significance to behavioral sciences other than geography. The L_{12} connection represents output from the system and equates with search and planning on the part of the system. The L_{21} connection represents the processes by which parts of the environment become

⁶Walmsley, "The Simple Behaviour System," 52; F. E. Emery and E. L. Trist, "The Causal Texture of Organizational Environments," Human Relations, 18 (1965), 21-32.

interdependent and which determine the nature of interaction with the system.⁷

Four levels of system environment interaction are postulated in the simple behavior system. The first two levels apply to stimulus-response and ecological conceptions of man respectively. The fourth level is relevant to organizational behavior rather than individual behavior. The third level, however, serves as an appropriate framework for studying criminal spatial behaviour. This level consists of a purposive system (L_{11}) in a disturbed reactive environment. The system can behave in more than one way and can display choice among alternatives rather than mere selection. Within the environment goals and noxiants are related in a meaningful way, but an element of competition exists between systems with similar needs. It is this competition that gives the environment its reactive nature. The learning process (L_{21}) comprises not only assessing the distribution of goals and noxiants but also analyzing the principles underlying the behavior of rivals (e.g., the police). The system is concerned with problem solving so consequently the search procedures (L_{12}) call for an overall strategic plan and an ordering of tactics. In the model of criminal behavior elements of this general model are interfaced at several levels.

⁷Walmsley, "The Simple Behaviour System," 52.

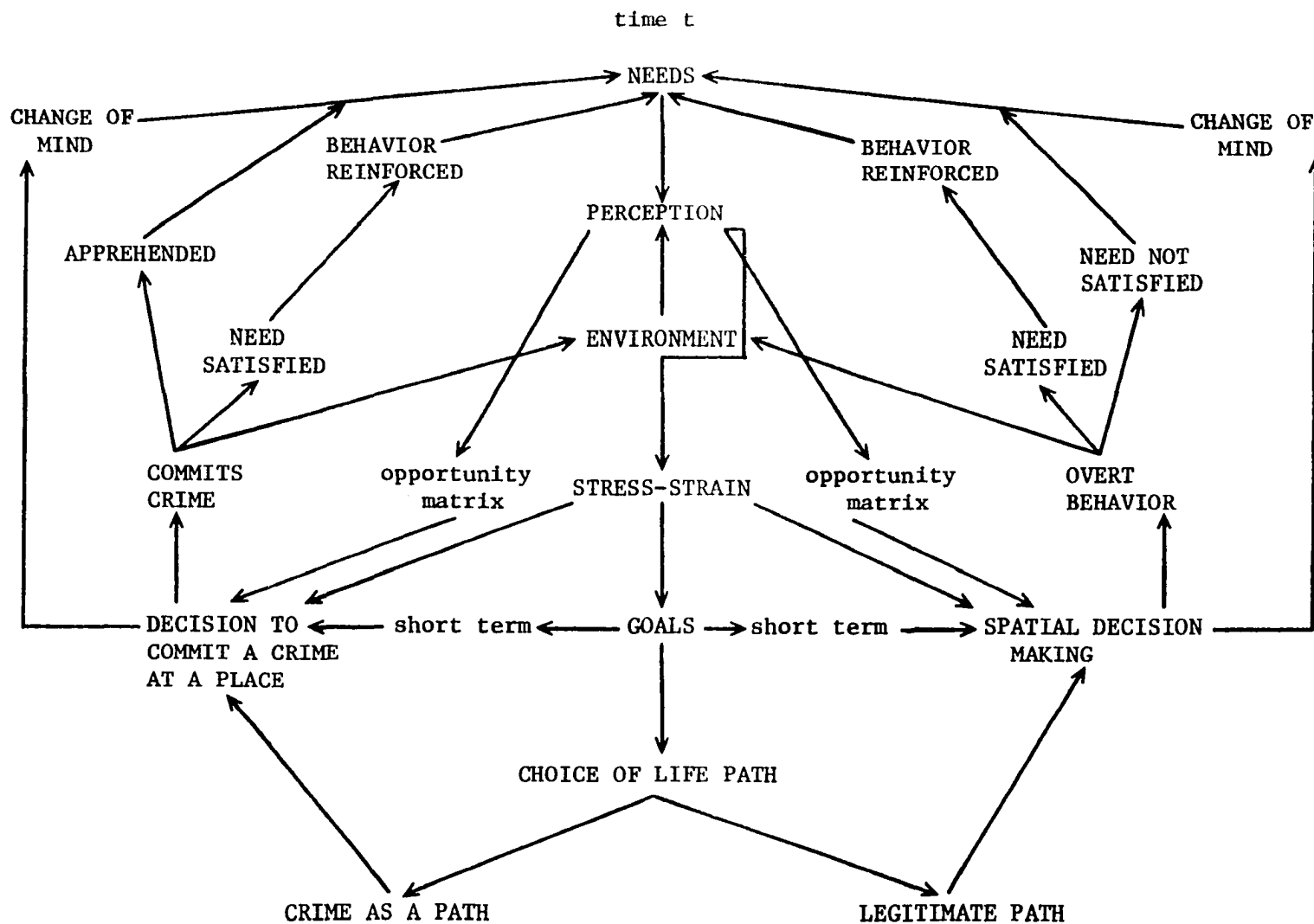
A Model of Criminal Behaviour

Figure 1 depicts the basic structure of the model of criminal behavior. The spatial aspects of criminal behavior are the focus of the model and are eventually operationalized. The model is not limited, however, to a consideration of why the criminal goes to a particular place to commit his crimes. In the early stages it analyzes influences which are believed to prompt one towards crime as a life path. In subsequent stages it encompasses spatial behavior of a non-criminal nature as well as a criminal nature. At all levels the model reflects the writer's own orientations concerning the causes and spatial patterning of property crime, as the conceptualization depicts criminal spatial behavior as but a special case of ordinary human spatial behavior. The model assumes, thus, that the criminal and the non-criminal are operating under the same general behavior system.

Three basic components can be identified in the study of human behavior: needs, the objective environment, and the individual's perception of his needs and his environment. The latter represents system-environment interaction and is instrumental in the construction of a mental image of that environment. The image, so derived, affects the individual's decision-making process, thus behavior, at several points in the model. Within the model a sequence of decisions is postulated and an attempt is made to specify the primary factors influencing the outcome of each. Attention is focused on the spatial context in which these decisions are

FIGURE 1

MODEL OF CRIMINAL BEHAVIOR



made. Each component of the model is discussed in relation to its role in the present study.

Needs

The model is actor oriented. For each actor there exists a need set which is related to his aspirations and his present situation; thus, needs are an individualistic phenomenon. Because many needs are specific to the person, it is almost impossible to precisely identify any one person's needs. This is essentially the position of Gans who states: "Urban residents do not share common needs and desires."⁸ General needs, however, may be identified. One of the most useful frameworks, formulated by Maslow, holds that human needs exhibit a hierarchy consisting of three levels: physical, social, and self.⁹ Subsumed under physical needs are physiological--the fundamentals of survival, including hunger and thirst, and safety needs--a concern for physical survival. Under social needs are belongingness and love--the striving to be accepted and esteem and status. Acceptance, esteem, and status are relative. Self needs are self actualization--a desire to know, understand, systematize, organize, and construct a system of values. Some individuals are thought to be fixated at the lower levels of the hierarchy. The criminal, for example, may be primarily concerned with esteem and status relative to others in

⁸Gans, People and Plans, p. 10.

⁹Abraham H. Maslow, Motivation and Personality (New York: Harper and Row, Publishers, 1954).

his behavior pattern in addition to the more basic needs. Some criminals, however, may approach self actualization in their own way.

The spatial manifestation of needs in terms of behavior patterns may also exhibit a hierarchical structure. For example, spatial behavior to satisfy physical needs would include: shopping for food, seeking health care, the journey to work, or even the journey to commit a crime. All are means of satisfying needs at some level. Safety needs would be reflected by the individuals choosing a safe route for travel or not going to certain places to accomplish a purpose (e.g., to steal). The structuring of an acquaintance network or committing crimes at places considered daring or very profitable by one's peers would illustrate the fulfillment of social needs. Self needs would be reflected by the individual's engaging in activities which require a degree of skill and if successful give a sense of pride in one's accomplishments. Needs, thus, color one's evaluation of his milieu; that is, each place in the environment will have a measure of utility attached to it in terms of its need satisfying power.

Environment

The objective environment consists of characteristics of culture, society, governmental bureaucracy, nations, states, cities, neighborhoods, specific places within neighborhoods, businesses, dwellings, and people--in other words, everything. Objective spatial structure is an extremely complex phenomenon. Simon has noted, for example, that it may be useful to think of human behavior as being quite

simple, but that most people live in very complex physical, man-made and social environments so their actual behavior appears extremely complicated.¹⁰

The environment, which varies over time and space, offers both opportunities and potentially harmful forces. Opportunities at all scales range from the chance for a good job, the chance for social advancement, to the location of shopping opportunities and the location of potential targets from which to rob or steal. Harmful forces in the environment are manifest also at several levels ranging from disease, pollution and war to smaller scale considerations such as reckless drivers or, if one is a criminal, the actual distribution of police surveillance. Opportunities and noxiants, therefore, may exhibit both spatial and temporal variation. Some of this variation is accounted for by the reactive nature of the environment to human behavior.

The environment also has a distributive quality. Parts of it are discrete and others--places--are abstracted from a continuous variable surface. It is subdivided according to relevant attributes, some of which are positional and some of which involve meaning.¹¹ Only a rather limited part of the objective environment is relevant to the indi-

¹⁰ Herbert Simon, The Sciences of the Artificial (Cambridge: MIT Press, 1969).

¹¹ John Harrison and Phillip Sarre, "Personal Construct Theory in the Measurement of Environmental Images: Problems and Methods," Environment and Behavior, 3, 4 (December, 1971), 351-74.

vidual and applicable to decision-making.¹² This stems from the fact that it is physically impossible for human beings to be completely aware of their surroundings. The objective environment of which the individual is aware provides a continuous source of stimuli to which both criminal man and non-criminal man responds in the form of feelings, attitudes, values, expectancies, and desires. There is not, however, a one to one relationship between even the known environment and overt behavior as is discussed next.

Perception

Needs and environmental offerings converge to influence the perception, image, or mental construction held by the individual of his environment. He is conceptualized as possessing a general image of his environment which becomes transformed into a purposive image as the need arises. Depending on one's life style, these may converge over time. This personal image of space begins as a complex sensory process and evolves into a cognitive process--objective phenomena have meaning for the individual. As Brookfield says, "Decision makers operating in an environment base their decisions on the environment as they perceive it, not as it is."¹³ Objective spatial structure, then, is several steps

¹²Julian Wolpert, "Behavior Aspects of the Decision to Migrate," Papers and Proceedings of the Regional Science Association, 15 (1965), 163.

¹³H. C. Brookfield, "On the Environment as Perceived," Progress in Geography, 1 (1969), 51.

removed from the actual decision and from the behavioral act. White, concerning the linkages between environment, decisions, and behavior, states: ". . . the individual's behavior may be said to be governed by his perception, that is, by the attitudes and awareness that he possesses with regard to alternatives."¹⁴ The attitudes which influence one's perceptions are related to unique aspirations, values, and goals. These change through time as Tuan has pointed out and may even contain ambiguity.¹⁵ The changing nature of one's perceptions, which must change if attitudes, values, and goals change, has also been discussed by Piaget.¹⁶ Awareness, which will be discussed in detail relative to the decision to commit a crime at a place, is the result of one's experiences with environment, both direct and indirect.

It is not, thus, objective needs and objective environment which are relevant to the person's behavior, but his perception of his needs and his environment. Although both are individual specific, there may be group similarities in perceptions especially as these relate to the person's own group. The criminal, for example, may observe others in his environment with valued symbols such as flashy cars, expensive

¹⁴Gilbert F. White, "Formation and Role of Public Attitudes," in Environmental Quality in a Growing Economy, ed. by Henry Jarrett (Baltimore: The Johns Hopkins Press, 1966), p. 126.

¹⁵Yi-Fu Tuan, "Ambiguity in Attitudes Toward Environment," Annals of the Association of American Geographers, 63, 4 (December, 1973), 411-23.

¹⁶Piaget and Inhelder, The Child's Conception of Space.

clothes, and a nice "pad," and perceive that he too needs them. If he does not possess the means to acquire these symbols, however, frustration and alienation may occur. The non-criminal may perceive also that his environment does not offer what he perceives as his needs. An obvious example would be in terms of the site and situational characteristics of his dwelling or neighborhood.¹⁷ Both examples are cases where one's present circumstances do not provide desired utility.

Stress-Strain

When the individual perceives a disparity between what he perceives he needs and what he feels the environment is offering, stress may occur. Langner citing Engle's definition states: "A stress may be any influence, whether it arises from the internal environment or the external environment, which interferes with the satisfaction of basic needs or which threatens to disturb the stable equilibrium."¹⁸ Stressors may be, also, perceived noxiants in the environment. Although little is known concerning what the criminal perceives as noxious, the police would prefer to feel that they are.¹⁹ The criminal's perception of

¹⁷See Lawrence Brown and Eric Moore, "The Intra-Urban Migration Process: A Perspective," Geografiska Annaler, 523 (1970), 1-13.

¹⁸T. S. Langner and S. T. Michael, Life Stress and Mental Health, Vol. II (New York: The Macmillan Co., 1963), p. 12.

¹⁹Thomas J. Sweeney and William Ellingsworth, Issues in Police Patrol (Kansas City; Missouri: Police Department, 1973).

police protection within a certain area might approximate such a measure.

The non-criminal receiving stimuli from his environment could also perceive a stimulus as stressful. The intrusion of certain ethnic groups, neighborhood deterioration, and pollution would illustrate this circumstance. In addition to these situational factors, site variables such as condition and size of dwelling could provide stressful stimuli.²⁰

The perception of stress, based on one's threshold tolerance level, may produce strain. Strain is the individual's response to a stressful stimulus. A low threshold level could lead to a rash decision. For the non-criminal this might be the sale of the dwelling at below market price or the selection of a dwelling which does not measure up to aspirations. The criminal who is behaving under stress or whose threshold is relatively low may meet with disastrous results such as loss of life or freedom.

The individual confronted with stress has several options for dealing with it. Wolpert cites Kahn's conceptualization of the coping mechanism to environmental stress:

. . . The person who confronts an environmental stress may be viewed as having three interrelated tasks to accomplish:
 (1) deal with objective situation so as to reduce or eliminate its stressful characteristics, that is, resolve the core problem,
 (2) to deal with the tension and negative emotions which the stress arouses in him, and (3) to deal with secondary or

²⁰See Wolpert, "Behavioral Aspects of the Decision to Migrate," and Brown and Moore, "The Intra-Urban Migration Process."

derivative problems which may be created by his efforts to cope with the stress or its emotional consequences.²¹

This notion has been elaborated by Brown and Moore in the context of intra-urban migration. "For any single household, the stress associated with a given situation may be reduced to or maintained at tolerable limits by (1) adjusting its needs, (2) restructuring the environment relative to the household so that it better satisfies household needs. . . ., or (3) relocating the household."²² In terms of the present model these alternatives are applicable also because feedbacks may occur within the system based on decisions made at various points. Option three is particularly applicable as this would represent the decision to commit a crime and the subsequent search for a target.

Goals

Like the individual's needs and the characteristics of his environment, the person's goals are manifest at several levels. At the most general level, goals relate to the person's aims or purposes in terms of what he desires from life. Included are ambitions for success, honor, or power, all of which are related to his aspiration level. These considerations exhibit individual variation and are relative to the positions

²¹R. L. Kahn, et al., Organizational Stress (New York: John Wiley and Sons, 1964), cited in Julian Wolpert, "Migration as an Adjustment to Environmental Stress," Journal of Social Issues, 12, 4 (1966), 44.

²²Brown and Moore, "The Intra-Urban Migration Process," 2-3.

of significant others, but similarities are believed to hold for groups. There are various means, such as illegitimate, to accomplish life's goals, but the end result (goals) may be the same. For example, the criminal may or may not aspire to the life style of the middle-class law-abiding citizen, or he may aspire to a life style which is not realistically attainable. He may desire to live like Al Capone (in his better days).

At another level are short-range immediate goals which exhibit a spatial manifestation. The journey to work, a trip to the movies, a visit to a friend, the search for a new residence, or the casing of a potential mark would illustrate the point. These are examples of short-term goal-directed behavior, and purposeful mobility is permitted by a goal-directed image of the city.²³ The general image of environment one begins with converges with the goal-directed image as the need arises. The degree to which a particular environment or image thereof fulfills a behavioral goal is known as congruence.²⁴ There probably is a time early in one's experiences with an urban environment that the general image is non-congruent with the goal-directed image; that is, the individual may see his goals blocked due to unfamiliarity. The new resident or criminal in an unfamiliar city may make a locational decision that he might not make were he more aware of the city's characteristics.

²³Lynch, The Image of the City.

²⁴William Michelson, "Urban Sociology as an Aid to Urban Physical Development: Some Research Strategies," Journal of the American Institute of Planners, 35 (March, 1968), 106.

Choice of a Life Path

The discussion to this point has been presented in such a manner as to apply equally to the non-criminal as well as the criminal. The following sections are directed more toward the criminal himself. To understand certain principles it is necessary to consider the point where some individuals are prompted in the direction of crime as a life path while others are not. More specifically, why do some individuals commit property crimes while others choose not to?

There are as many theories of criminogenesis as there are theories of human behavior--maybe more. Loosely, they can be classified as biological, psychodynamic and sociological. Among these theories of crime causation most attention has been afforded sociological explanations, of which modern criminology is a part.

Important contributions in the early stages of scientific criminology were Quetelet and Mayhew.²⁵ These researchers provided considerable methodological impetus to the Chicago school's later ecological studies.²⁶ One of the first to recognize cognition and volition as important factors was Gabriel Tarde.²⁷ Most studies up to Tarde tended to assume a direct relation between those social forces responsible for crime and

²⁵Adolphe Quetelet, A Treatise on Man (Edinburgh: William and Robert Chambers, 1842); Henry Mayhew, London Labor and the London Poor (London: Griffin, Bohn, and Co., 1861).

²⁶See Shaw and McKay, Juvenile Delinquency and Urban Areas.

²⁷Gabriel Tarde, Penal Philosophy (Boston: Little, Brown and Co., 1912).

the type of criminal produced. Sylvester states that: "For the most part they ignored the obvious fact that crimes are committed by individual human beings, who, however much they may be influenced by their social milieu, do not respond to it as automatons. Social factors are filtered through individual consciousness and, by some process involving both the pre-existing individual and the new social experience, behavior is determined."²⁸ Most explanations are interrelated--one cites one cause which subsumes, but includes a cause that another has cited. Some examples of explanations that are currently popular, and to a degree all correct, are: Sellin's "conflicting norms," Sutherland's "differential association," Shaw and McKay's "social disorganization," Merton's "anomie," Cloward and Ohlin's "differential opportunity," and Radzinowicz's "economic pressures."²⁹

The most appealing in terms of the present model is Cloward and Ohlin's "differential opportunity" theory. It is felt that their theory

²⁸Sawyer F. Sylvester, The Heritage of Modern Criminology (Cambridge: Schenkman Publishing Co., 1972), p. 5.

²⁹Thorsten Sellin, Culture Conflict and Crime (New York: Social Science Research Council, 1938); Edwin Sutherland, Principles of Criminology (Philadelphia: J. B. Lippincott Co., 1939); Shaw and McKay, Juvenile Delinquency and Urban Areas; Robert Merton, Social Theory and Social Structure (Glencoe, Illinois: The Free Press, 1957); Richard Cloward and Lloyd Ohlin, Delinquency and Opportunity (Glencoe, Illinois: The Free Press, 1960); Leon Radzinowicz, "Economic Pressures," in Crime and Justice, Vol. 1, The Criminal in Society, ed. by Leon Radzinowicz and Marvin E. Wolfgang (New York: Basic Books, Inc., 1971).

comes nearer to explaining why some lower class individuals are prompted toward property crime. Briefly, their thesis is as follows:

The disparity between what lower class youth are led to want and what is actually available to them is the source of a major problem of adjustment. Adolescents who form delinquent sub-cultures, we suggest have internalized an emphasis on conventional goals. Faced with limitations on legitimate avenues of access to these goals, and unable to revise their aspirations downward, they experience intense frustration; the exploration of non-conventional alternatives may be the result.³⁰

They continue:

. . . In general, the poor desire a proportionately larger increase in income than do persons in higher status. If, as we have suggested, lower class persons experience relatively greater dissatisfaction with their present position and also have fewer legitimate ways of changing status, then they should experience greater pressures toward deviant behavior.³¹

The analogy with the present model is clear. The individual has perceived needs and he perceives that the environment may or may not satisfy them. He may experience stress and feel that his legitimate goals are blocked. One could speculate, too, that he rates the degree of blockage. In other words, illegitimate means may be perceived as quicker and easier than legitimate means; that is, he makes a choice. The criminal does not steal against his will.³² Most view him as rationally sane and not pathological; he is doing his job.³³ This is sub-

³⁰Cloward and Ohlin, Delinquency and Opportunity, p. 86.

³¹Ibid., pp. 89-90.

³²Peter Letkeman, Crime as Work (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1973), p. 22.

³³David Maurer, Whiz Mob (New Haven, Conn.: College and University Press, 1964), p. 14.

stantiated by Letkeman quoting one of his interviewees:

. . . "When I was down to a certain level I would go out."
That is, money factors dictated the temporal routine; but the method of acquiring such money is a matter of perceived choice, both for the criminal and for the square john. Criminals distinguish between various factors and motivations that they feel cause crime. They know that some crimes are committed in a deliberate and rational manner, others, such as those generated by frustration, may be done impulsively.³⁴

The choice of crime as a path, then is just that--a choice.

The choice, however, in the most general sense is based on the disparity between perceived needs and perceived environmental opportunities.

The factors influencing one's perception of his alternatives are complexly grounded in attitudes, values, and the internalization of society's norms.

Most researchers feel that the criminal is only partially committed to the norms of society; that they do not reject completely the dominant values, they merely neutralize them when committing a crime.³⁵ For example, in a curious version of the middle class work ethic, one of Letkeman's subjects said that he would rather choose crime ". . . than collect social welfare and be a nuisance for the rest of my life."³⁶

If these researchers are correct one would suspect that the criminal's image of his environment would share a great deal of commonality with the non-criminal's, but differ with respect to their chosen life

³⁴Letkeman, Crime as Work, p. 22.

³⁵Marshall Clinard and Richard Quinney, Criminal Behavior Systems: A Typology (New York: Holt, Rinehart and Winston, 1967), p. 142.

³⁶Letkeman, Crime as Work, p. 23.

paths. In other words that their general image would be very similar, but that portion representing goal directed behavior would be different.

The Decision to Commit a Crime at a Place

The causes of crime, per se, are not the primary concern of this research. At this point in the model the individual has either chosen crime as a life path (although he may change later--in either direction) or he has not. If he has, he evaluates his environment on a goal specific basis. This environment consists of areas within the city and specific targets, each with a measure of utility attached to it. Now he is going to commit a crime and rates his environment on that basis. Assuming that the first time offender underwent this rating process, one could surmise that he may not have been very accurate. He may even have been caught. Some individuals, then, would spin off from the rest of the steps of the model at this point via the feedback to needs. He could reconsider his needs and opportunities while serving time. On the other hand, the first time criminal, while not in possession of a completely accurate cognitive structure of his environment, might receive relevant information from an associate or, for that matter, may have accompanied a more experienced person on his first illegitimate episode.

Information

The criminal has perceived needs which require satisfaction. Where are the areas where he could anticipate that his environment might

provide this satisfaction? A partial answer is that it depends on his level of information about his environment. Through information he becomes aware of differential environmental opportunities. The individual's level of knowledge of any environment is a function of his experience in that environment. This knowledge will be unique to him, but individuals from similar spatial locations will share similar knowledge.

The environment which provides information may be conceived as a set of "behavior spaces." Behavior spaces are divided into "action spaces" and "activity spaces." Several researchers have provided definitions including Wolpert, Horton and Reynolds, and Brown and Moore.³⁷ Action space refers to total awareness space, either through primary perceptual experience or through secondary learning, whereas activity space is constrained by both direct experience and time. Action space is defined as a subset of all locations within the urban area, this subset comprising those locations for which the individual possesses sufficient information to assign utilities.³⁸ Direct perceptual learning is self-defined. Secondary learning, the other component of action formation, refers to information about an area or a possible specific target passed to the criminal from an associate. Activity space, on the other hand, is the person's daily

³⁷Wolpert, "Behavioral Aspects of the Decision to Migrate"; Frank Horton and David Reynolds, "Effects of Urban Spatial Structure on Individual Behavior," *Economic Geography*, 47 (1971), 36-48; Brown and Moore, "The Intra-Urban Migration Process."

³⁸Wolpert, "Behavioral Aspects of the Decision to Migrate."

routine patterns in a local area and is concomitant with the accomplishment of short-range goals. Although it could not be directly investigated, one could speculate that the criminal's daily activities are not as spatially constricted as the non-criminal's.

For most individuals, knowledge of spatial opportunities decreases by some function of distance. This is analogous to Hägerstrand's notion of an information field.³⁹ Such an information field implies that the lengths of the criminal's trips to commit a crime are not random, but biased toward familiar locations.⁴⁰ This should be reflected by the aggregate patterns of crime being concentrated in close proximity to the offender's home. Distance bias could be manifest in another way, however, in that if he is aware of marks at a greater distance, all marks in between are intervening opportunities which may be perceived as containing greater utility. Information available to the criminal, thus, is a critical factor in his decision process and may affect the outcome of the decision. Cangelosi and others state: "Rationality of behavior is a function of the amount, quality, comprehensibility, and credibility of the information in the possession of the individual making the choice."⁴¹

³⁹Hägerstrand, "The Propagation of Innovation Waves."

⁴⁰Sarah L. Boggs, "Urban Crime Patterns," American Sociological Review, 30, 6 (December, 1965), 889-908.

⁴¹V. E. Congelosi, D. M. Robinson and L. L. Schkade, "The Utilization of Information in Rational Choice: A Cross-National Experiment," Social Science Quarterly, 50, 1 (June, 1969), 78-91.

The Search for a Mark

The criminal, in possession of varying amounts of information about his milieu, uses it to search for an area and a specific mark. This is illustrated by Letkeman in terms of "casing."

. . . The concept of casing, usually thought of as preparation for a specific caper, may be broadened to include the more general observations the criminal makes that bear on his work. The criminal's mentality consists in part of a complicated rating system that includes countries, states, provinces, cities, suburbs, down to specific companies and businesses . . . the criminal, like the tourist, the farmer, or potential resident, makes evaluations on the basis of factors relevant to his interests.⁴²

The criminal, thus, is looking at the city in terms of his specific goals. Scarr supports the proposition of a rating system in stating: "Ecological studies--including our own--strongly suggest that burglars perceive specific areas of the city as providing a greater opportunity for their crimes than others."⁴³

The criteria for establishing this rating system is based on a consistent use and organization of sensory clues from the environment.

⁴²Letkeman, Crime as Work, p. 138.

⁴³Harry A. Scarr, et al., Patterns of Burglary (2nd ed., Washington, D.C.: U.S. Department of Justice, 1973), p. 9; see also Boggs, "Urban Crime Patterns"; J. Fred Giertz, "An Economic Analysis of the Distribution of Police Patrol Forces," Miami University, Oxford Ohio, April, 1970; Norval Morris, The Habitual Criminal (Cambridge: Harvard University Press, 1951); Irving Spergel, Racketville, Slum-town, Haulburg: An Exploratory Study of Delinquent Subcultures (Chicago: University of Chicago Press, 1964).

This organization of environmental clues has been termed an opportunity matrix.⁴⁴ The elements of the opportunity matrix are all perceived relevant characteristics of both areas and specific sites. It includes, thus, areas being perceived as entities and site specific characteristics such as security systems, street lighting, number of doors, and ease of getaway.⁴⁵ The criminal's search behavior is guided by this matrix. When planning a crime (analogous to solving a problem in the simple behavior system), the rating attached to each element is determined by both strategic and tactical considerations. Strategic notions are the broader aspects of the problem such as the area to select, while tactics involve the very short-term plans required to surmount or neutralize site deterrents.

The criminal's environmental image, based on the above, is transformed via a complex evaluative process into a potential reaction surface.⁴⁶ This surface will indicate a measure of the probability that he will commit a crime at a particular place within a particular area of the city. It will reflect his personal assessment of the probable expected

⁴⁴Scarr, Patterns of Burglary.

⁴⁵See Heung Bum Nam, "Spatial Aspects of Crime and Environmental Opportunity" (unpublished Master's thesis, Oklahoma State University, 1973); Robert Gold, "Urban Violence and Contemporary Defensive Cities," Journal of the American Institute of Planners, 36 (May, 1970), 149-59; Newman, Defensible Space.

⁴⁶Man's evaluation of space is discussed in a following section.

outcome of his crime. The criminal, thus, builds a differentiative prediction field which is used in the search for a mark, one which is multi-scale in composition. This implies that he anticipates differential satisfaction of his needs and accomplishment of his goals in various areas, that is, differential spatial opportunities.

At this point in the model, the criminal is ready to make a locational decision. He has weighed the advantages and disadvantages of committing the crime in a particular area based on its expected outcome. Another decision, however, is possible. He may decide not to commit a crime at this time or possibly never commit another one. If this is the case, he will adjust his needs which is illustrated by a feedback loop to the need set.

Commits Crime

After the individual has made his decision and actually committed the crime, several possibilities are immediately apparent. First, he is successful, receiving all or more of the rewards he anticipated. Second, he is successful but only partially receives what was expected. Third, he is unsuccessful, receiving nothing for his time and efforts. Or, fourth, he is apprehended following possibly one, two or three. Depending on which of these outcomes occurs, the criminal's mental image and his environment will be affected.

His mental image is affected because the outcome is either as expected, which confirms his feelings and adds to his learning--or the

outcome was unexpected, which also contributes to his learning about the area. Confirmed expectations increase the probability that he will go to the area in the future, while unconfirmed expectations decrease the probability. Learning is discussed in a following section.

The environment is affected immediately by the addition of one more crime occurrence. The actions of several offenders, thus, result in the spatial patterning of crime within the city, depending on which type of property crime the person committed and the number of similar acts. This represents human behavior having a feedback effect on spatial structure and is one way in which the individual's actions influence his milieu. System-environment interaction such as this reflects elements from Walmsley's disturbed reactive environment.⁴⁷ The environment is reactive in that the efforts of citizens and police are competitive to the criminal. Their purposes are at odds with each other, thus, one attempts to reduce the effectiveness or out-manuever the other.

The ordinary citizen's overt behavior may take several forms also in that the end result of a trip may exhibit differential consequences. He, too, may experience varying degrees of success or, for that matter, failure.

⁴⁷Walmsley, "The Simple Behavior System."

Need Satisfied

After the criminal commits his deviant act, his needs in the physical sense will not be satisfied until he converts the money or goods into items which will satisfy his needs. The criminal who has stolen such items as televisions, stereos, or jewelry will need to fence or sell them before he can receive the money to satisfy his needs. The criminal who has accomplished a successful theft or robbery of money is in a much more advantageous position to quickly satisfy his needs.

If the needs which are satisfied are social, on the other hand, he may receive immediate gratification from his peers in the form of status and prestige within the group. Especially is this likely to be the case within a delinquent subculture. Many observers have noted that delinquents are deeply immersed in a restless search for excitement, thrills, and kicks.⁴⁸ The approved life style for many criminals is an adventurous one. Activities considered daring and dangerous are highly valued in comparison to more ordinary patterns of behavior.

Needs at the level of self also may be satisfied by some offenders. This situation would be in the form of pride or a feeling of craftsmanship after the accomplishment of a task. Some criminals, especially those engaged in crimes requiring skill, may become interested in learning, understanding, and systematizing their methods of committing

⁴⁸David Matza and Gresham Sykes, "Juvenile Delinquency and Subterranean Values," American Sociological Review, 26 (October, 1961), 712-19.

crimes. The best example is the business burglar or the safecracker who must be constantly aware of technological changes in alarm systems and safe design.

Behavior Reinforced

This portion of the model represents learning by the criminal of the places where he might go to commit a successful crime, or more general learning on the part of the system from the environment.⁴⁹ The learning phase is critical in terms of repeated behavior by the criminal to continue frequenting the same or similar areas during the course of his career.

The manner in which man learns, however, is not completely understood. Considerable debate is currently taking place on this controversial issue. Learning theory, thus, cannot be neatly compartmentalized into discrete units. The various learning theories may be loosely classified into two main groups: stimulus-response and cognitive theories. These are commonly known also as association and field theories. Within and between each major category several sub-groups exist, each of which hold a slightly different view of learning processes.

According to one set of associationist theories the criminal who has committed a fruitful crime will be positively reinforced by the completion of a successful task. The connection between the stimulus and the response has been followed by a satisfying state of affairs; thus,

⁴⁹Walmsley, "The Simple Behavior System."

that connection is strengthened.⁵⁰ According to another associationist, the connection between stimuli and responses is determined by their relation to drive and reward.⁵¹ A drive is a state of tension arising from a person's biological or social needs. A reward is the satisfaction of the need.

Lying midway between stimulus-response and cognitive theories is Tolman's conceptualization which asserts that learning is the building up of predictive fields based on the individual's testing hypotheses about perceived relationships between elements of the environment.⁵² This approach assumes trial and error behavior which places it in a similar position to the associationists with regard to conditioned responses. According to this theory the criminal has tested some hypotheses and conceivably made some errors; that is, he has attempted crimes at several locations before hitting a good target. Tolman, however, assumes man can be a purposive being rather than the mechanistic organism assumed by the associationists. The assumption that man is purposive, able to display choice among discrete opportunities in problem-solving situations, places Tolman's theory in an analogous position also to cognitive theorists. The primary difference is that

⁵⁰E. L. Thorndike, "The Psychology of Learning," Educational Psychology (Teachers College, Columbia University, 1913).

⁵¹C. L. Hull, A Behavior System: An Introduction to Behavior Theory Concerning the Individual Organism (New Haven: Yale University Press, 1952).

⁵²E. C. Tolman, Purposive Behavior in Animals and Man (New York: Appleton Century Crofts, 1932).

Tolman merely postulates the existence of intervening mental processes, while cognitive theorists attempt to understand them.

Cognitive theorists view learning as the personal discovery of meaning in a situation, or the development of an awareness of the relationships in one's personal environment. Perception is the critical factor of learning and occurs when relationships are restructured and new patterns emerge. Following the completion of a successful crime the criminal sees the area from a new perspective and thereby learns where he might anticipate satisfaction of his needs.

Although the author feels that the notions of Tolman and the Cognitive theorists make more sense in terms of repeated spatial behavior, how the criminal learns is not a primary concern of the model. What is important is that he does undergo a change in his mental structure or is reinforced, thus leading to the development of a re-occurring spatial behavior pattern. He will continue this pattern until he learns otherwise.

Time $t + 1 \dots n$

Rather than reaching equilibrium within his environment, the criminal continues to learn and perceive new meanings which in turn affect system-environment interaction. With repeated behavior there is a decreased uncertainty of behavioral outcomes. Time has expanded his experience, thus changing his image of the city. He has repeatedly confirmed and rejected hypotheses concerning perceived relationships by actual behavior or through the acquisition of relevant information

regarding the location of new opportunities or new deterrents. Over time learning is a multi-stage process, as suggested by Burnett when she says that "Decision makers continually improve their knowledge and selection of alternatives."⁵³

Over time one can conceive of the individual who begins with a general image of the city in terms of such structural characteristics as the locations of various social groups, the locations of business districts, and the relationships between them. In addition to structural relationships these locations possess meaning for the individual in terms of their perceived characteristics. For reasons not understood this individual chooses property crime as a life path to fulfill his needs and develops a goal specific, that is, criminal goals, image of the city. His original goal directed image may be fraught with error--he may make mistakes and get caught. To some this is all the negative reinforcement needed and he would subsequently choose legitimate means to accomplish his goals. For others, however, since the chances of being apprehended for property crime are relatively small they continue a criminal career and continue to refine their goal-oriented image of the city. In other words, his behavior has been so reinforced that his general image is the same as if he were perceiving the city in terms of a specific goal, that is, crime.

⁵³Pat Burnett, "A Three-state Markov Model of Choice Behavior Within Spatial Structures," Geographical Analysis, 11, 1 (January, 1974), 53.

Man's Evaluation of Environment

The environment provides a continuous source of stimuli to which man responds. It is not objective information, however, but information that has been filtered through his perception that is germane to his evaluation of that environment and his eventual behavior. It was stated above in terms of the criminal's decision to commit a crime at a place that he rates his environment on the basis of the sensory clues which it provides. These clues were said to be organized into an opportunity matrix containing all perceived relevant characteristics of both areas and specific sites. The question here is, on what basis does he perform this evaluation and is the basic process of evaluation analogous to that employed by the non-criminal? The concern is with similarities and differences that would be expected between these two groups on both processes and resultant evaluations.

Several theories of perception are applicable to the issue of basic processes and each relate to a slightly different aspect. Among these are Gestalt theory, field theory, and personal construct theory. Although no single theory offers a complete explanation of how man evaluates his environment, each contains certain useful key features.

Gestalt Theory

Gestalt theory maintains that man's evaluative processes are based on his perceiving phenomena as wholes rather than as sums of

their component parts.⁵⁴ Phenomena possess a meaning in and of themselves which would not be obtained if one examined the parts individually or in total. As an example it can be said that the neighborhoods of a city (or the entire city, for that matter) possess a meaning greater than the sum of their houses or streets.⁵⁵ In Gestalt theory neighborhoods or areas are initially perceived as inviting or repelling, exciting or dull. These environmental attributes are only examples, however, and others would serve equally as well. It is important to know if the same areas are perceived similarly or differently by the criminal and the non-criminal. Although most areas contain internal variation in terms of characteristics, this would not influence the initial perception and its resultant meaning to the individual.

Field Theory

Similar to Gestalt theory is Lewin's field theory.⁵⁶ According to field theory man evaluates his environment in terms of positive and negative valences on a mental map type surface known as the "life space." The life space is organized in terms of psychological principles and refers to the individual's interpretation or evaluation of his environ-

⁵⁴Solomon E. Asch, "Gestalt Theory," International Encyclopedia of the Social Sciences, 6 (1968), 158-75.

⁵⁵Lynch, The Image of the City.

⁵⁶Kurt Lewin, Field Theory in Social Science (New York: Harper and Row, Inc., 1951).

ment as filtered through his cognitive and motivational structures. The individual's situation relative to perceived social forces also influences this evaluation. There is not a one to one relationship, therefore, between the objective elements of the environment and the positive and negative elements of the life space.

Personal Construct Theory

A more specific conceptualization of man's evaluative processes is Kelly's personal construct theory.⁵⁷ He postulates that man arranges features of his perceived environment on the basis of its attributes. These attributes are not necessarily physical in nature, but involve more intangible psychological meanings which may be specific to the individual. Environmental attributes are considered to be arranged by each person into bipolar scales which express meaningful contrasts. Most scales, however, tend to cluster into several smaller groups forming dimensions which are used for evaluation. Examples of these bipolar scales are good-bad, rich-poor, and clean-dirty. Although the scales used by the individual are specific to him, there are many scales used by all. For interpersonal communication and group comparisons this must be the case. Personal construct theory, which is utilized in this research, is particularly applicable for obtaining people's general evaluations of concepts such as areas of the city.

⁵⁷George A. Kelly, The Psychology of Personal Constructs, Vols. 1 and 2 (New York: Norton, 1955).

Most previous work in environmental evaluation has been in terms of a specific notion such as asking the question: "Would you like to live in . . . ?"⁵⁸ The individual, thus, is judging phenomena on the basis of livability. In work with general evaluation, however, one is more interested in the manner in which evaluative criteria are significant to the person and how they cluster together to form the dimensions used in decision-making. When seeking differences among groups such as criminals and non-criminals this becomes an issue of critical importance.

Influences on Evaluation

The above theories, thus, suggest that at the general level there is no difference in the basic evaluative processes used by the criminal and the non-criminal. Beyond this, no work has been done to discover what differences and similarities may exist which would influence the place perceptions of criminals. On what basis, then, are evaluations made and are all common to both groups? Several works on place perceptions indicate that evaluations can be based on several diverse factors. Among these are: (1) available information--a function of experience and spatial location, (2) race or culture, (3) social class, (4) age, (5) values, (6) aspirations, (7) goals, (8) education, (9) emotional state, and (10) physiological considerations. Both criminals and non-

⁵⁸L. E. Jackson and R. J. Johnston, "Underlying Regularities to Mental Maps: An Investigation of Relationships Among Age, Experience, and Spatial Preferences," Geographical Analysis, 11, 1 (January, 1974), 53-68.

criminals may be very much alike on these not mutually exclusive factors, but differ with respect to only one thing--criminality. Several of these considerations are discussed below.

The importance of information to the individual has been discussed previously in this chapter. It will be recalled that the information actually available to the individual is a function of his experiences with environment both directly and indirectly. Individuals from very similar spatial locations, therefore, should share very similar amounts of information about their immediate environments. This results from direct experience in the activity space. Information relevant to the rest of the environment comes via the action space. The manner in which the criminal and non-criminal interpret this information will be similar also, to a point, as discussed below.

Considerable work has been done concerning differences between races and cultures in environmental perception. It has been shown, for example, that lower income blacks and Spanish-Americans have a much more restricted view of the city than whites.⁵⁹ The influence of spatial location, however, cannot be removed from the influence of race,

⁵⁹Florence Ladd, "A Note on the World Across the Street," Harvard Graduate School of Education Association Bulletin, 12 (1967), 47-8; Peter Orleans, "Differential Cognition of Urban Residents: Effects of Social Scale on Mapping," Science, Engineering and the City, Publication 1948, Washington, D.C., National Academy of Engineering, 1967; James Harrison, "Environmental Preferences Within Urban Neighborhoods" (unpublished Ph.D. Dissertation, University of Oklahoma, 1972).

culture or social class. Most cities have areas which are the primary residential locations for minority races or cultures. Primary activity patterns, thus, are concentrated in smaller areas than is the case for most whites. One residing or growing up in such an area would experience different acculturation and socialization processes than the residents of another area. Within these areas, dominant values, aspirations and possibly education levels will be manifest for the majority of the inhabitants.

Within one race and social class, in similar spatial locations, then, the criminal's and non-criminal's evaluative criteria should be very similar. Their evaluation of the almost objective environmental phenomena such as socio-economic status in an area should be alike. While there may be some fluctuation between conventional and non-conventional norms and values, which also influence perceptions, the criminal and the non-criminal should be different in one major respect. They should differ with respect to their goals in terms of the city. The criminal is thought to evaluate the city from the perspective of his criminal goals. Since a cross section of non-criminals should not have a common goal, the criminal's special purpose should stand out. As mentioned in an earlier discussion of "casing," the criminal evaluates the city on the basis of factors relevant to his interests much like the tourist, the farmer or the new resident.⁶⁰ This evaluation may be colored

⁶⁰Letskeman, Crime as Work.

by his quest for excitement, thrills, and kicks as suggested by Matza and Sykes.⁶¹ Familiarity, also, is believed by some researchers to be a key consideration employed by the criminal when choosing a mark.⁶² If this is the case, familiarity with areas should stand out as a factor of great importance to him. In addition, if it is such a key factor for the criminal, it should be related to or co-vary with other attributes of interest to him.

Images and Behavior

The simple behavior system described in the initial portion of this chapter is the conceptual framework for this analysis. The entire model is based on the concept that a causal relationship exists between one's environmental image or perception and one's behavior. Since the model is used as the organizing conceptual framework for this study, it is axiomatic that there is an association between images and behavior. Sufficient evidence is available in such contexts as animal behavior, mobility in the city, migration, the journey to work, and shopping behavior to show that such an association does, in fact, exist.⁶³

⁶¹Matza and Sykes, "Juvenile Delinquency and Subterranean Values."

⁶²Boggs, "Urban Crime Patterns."

⁶³Tolman, Purposive Behavior in Animals and Men; Herbert Simon, Models of Man (New York: John Wiley and Sons, 1957); Wolpert, "Behavioral Aspects of the Decision to Migrate"; Frank Horton and David Reynolds, "An Investigation of Individual Action Spaces: A Progress Report," Proceedings of the Association of American Geographers, 1 (1969), 70-5; Lynch, The Image of the City; Carr and Schissler, "The

Research has consistently implied and verified that the image people hold of space influences their decisions and subsequent spatial behavior.

Some evidence shows this not to be a one to one relationship, but instead probabilistic.⁶⁴ The image, which is a behavioral process, results from the interaction of at least two other behavioral processes, learning and attitudes. Golledge defines a behavioral process as a "mechanism for inducing a temporal unfolding of a behavior system. The human behavioral process (that is, the one concerned with goal directed human behavior) is that process which induces a temporal sequence of directed acts on the parts of individuals."⁶⁵ Images of phenomena, thus, permit the purposeful mobility necessary to accomplish one's goals.

Of specific concern now is the question: is criminal spatial behavior a special case of non-criminal spatial behavior with the only difference obtaining from his specific goals or behavioral context? Depending upon the context within which one views his environment, different dimensions of place may be relevant to the individual. Dimensions of

City as a Trip"; T. Saarinen, Perception of Environment, Commission on College Geography, Resource Paper No. 5 (Washington, D.C.: Association of American Geographers).

⁶⁴Charles Tittle and Richard Hill, "Attitude Measurement and Prediction of Behavior: An Evaluation of Conditions and Measurement Techniques," Sociometry, 30 (June, 1967), 199-213.

⁶⁵Reginald Golledge, "Process Approaches to the Analysis of Human Spatial Behavior," Discussion Paper No. 16, Department of Geography, The Ohio State University, November, 1970.

place are constructed from environmental attributes. Any object, an area of the city, a person, an automobile or a stone may be said to possess many attributes which might serve to describe it. All individuals, however, do not utilize the same attribute when evaluating this phenomena. The evaluation of a single automobile, for example, might be based on the attribute "economy" by one person and the attribute "comfort" by another, depending on their purposes in terms of this automobile. Attributes, according to Kelly, tend to cluster into dimensions used in evaluation. Each dimension is composed of attributes which express in varying degrees essentially the same meaning for the individual.

Dimensions of place are also formed from groups of similar environmental attributes. Peterson, for example, discovered that the dimensions employed for evaluating small areas within neighborhoods were "closeness to nature" and "newness."⁶⁶ As mentioned above, other researchers have supplied dimensions of place such as livability and climate. When individuals are allowed to make evaluations of places using general environmental attributes, however, several dimensions may emerge. Some examples would be dimensions interpreted as representing aesthetics of the area, size of the area, physical distance from this place to other places, socio-economic status, activity patterns, livability and many more. Dimensions of place within the image, there-

⁶⁶G. L. Peterson, "A Model of Preferences: Quantitative Analysis of the Perception of the Visual Appearance of Residential Neighborhoods," Journal of Regional Science, 7 (1967), 19-32.

fore, are specific to the individual's purposes or the context in which they are used. It should be noted, however, that some attributes of places are more objective than others and probably will be seen similarly by all.

If as stated above, the criminal evaluates areas or places in terms of his interests, a dimension should emerge in his mental image which reflects these interests; that is, a goal directed image. Since images are associated with behavior, this dimension should be related to his behavior patterns, in terms of where he goes to commit his crimes, more so than to other dimensions that he might utilize for general evaluations. Gestalt theorists suggest, also, that individuals tend to group objects by proximity and similarity, so that like objects are located close to one another in the individual's mental representation. If this is the case, and perceptual distance represents perceived dissimilarity the more unlike areas in terms of the criminal's goals should be located at greater distances in this perceptual space. This perceptual distance should also be related to the criminal's activity patterns in such a manner that the farther some areas are from a favored location for crime, the less crime they should experience by the individual. The surface of this space can be conceptualized, therefore, as a potential reaction surface, with each area on that surface having a measure of the probability of interaction by the criminal attached to it. Another interesting phenomenon could occur. The criminal's mental image of one place

could be transferred to a place that is perceived to be similar on certain dimensions. This could lead to a decision to commit a crime there, as this area would also have utility in terms of criminal goals. It would, thus, possess a positive valence and the criminal would move toward it.

Once behavior by the criminal and the non-criminal has occurred in a place his image will be affected via the learning component of his image. The form of this learning will depend upon the outcome of the behavioral act. If the criminal has committed a successful crime, his behavior is reinforced and his image of that area enhanced. He should continue this behavior until something occurs which changes his image. The criminal, thus, is seen as an individual who not unlike the non-criminal in terms of the basic processes is continually redefining his image following his behavior. The criminal's estimation of the subjective probability of success will continue to undergo changes based on the outcome of his behavior. There will be less uncertainty in some areas as learning occurs and possibly more in others. He will gain an increased awareness of potential opportunities and, for that matter, noxiants via his behavior.

The above basic processes are all derived from knowledge concerning non-criminal spatial behavior. The criminal, who is thought to employ these same processes in interaction with his environment, therefore, should be similar to the non-criminal in many respects. He should utilize many of the common evaluative dimensions mentioned

above in a very like manner to the non-criminal. He may, however, while using common evaluative reference dimensions, locate areas differently than the non-criminal. If this is the case, the meaning of that area to him will be entirely different and consequently his image-behavior relationship will be changed.

Summary

This chapter has presented a model of criminal behavior. Based on the model, several results of an empirical application of its spatial components are expected. These expectations refer to two major questions: (1) Is the criminal's environmental image different from the non-criminal's, and (2) Is the criminal's environmental image associated with his actual spatial patterns of criminal activity?

In terms of the first question, the criminal and the non-criminal are expected to exhibit similarities in general evaluative dimensions of environment. A major difference may occur, however, when race is considered. In other words, the criminal and non-criminal within one race may be more similar to one another than they are to their respective counterparts of the other race. This would result from the culture and spatial influences discussed above. On dimensions other than general evaluation, the criminal and non-criminal are expected to differ considerably. Hopefully, a major difference will be in terms of the key consideration--familiarity. If the evidence stated above is correct, this notion should be of greater importance to the criminal than

to the non-criminal, as the consequence of unfamiliarity in a dangerous business may be severe.

The criminal's mental image of environment is expected to be associated with his behavior patterns. Images and behavior, however, are not deterministically related so that the association will not be one to one. Of the several dimensions composing his image, one--that related to familiarity--should be related to his spatial activities more than the other. This unrelated dimension should be a general evaluative one. A measure of the probabilities attached to his potential reaction surface should also obtain from the analysis. Again, a one to one relationship is not expected between perceptual distance and behavior, but the association should be striking. It will not be surprising if the non-criminal image is related to the criminal's behavior patterns even though he is not responsible for this behavior, since the dimensions used in evaluation could be similar and perceptual distances based on other considerations could be similar also.

CHAPTER III

METHODOLOGY

This study is an effort to determine if a relationship exists between the criminal's environmental image and his actual criminal behavior patterns within the city. Thus, it is postulated that the criminal's decision-making process and consequent spatial behavior are associated with his environmental image of the city.

Also of concern is the question of how environmental images might vary with the characteristics of individuals. The characteristics investigated here are: whether the individual is a criminal or not, his race, his spatial location within the city and his age. These considerations are believed to partially explain differences in environmental images.

Propositions

The overall problem is approached within the context of a series of propositions.

Proposition 1: The criminal's spatial patterns of property crime within Oklahoma City are associated with his environmental image of the city.

Proposition 2: The criminal's environmental image of Oklahoma City

differs from the non-criminal's environmental image of the city.

Proposition 2a: The white criminal's environmental image of Oklahoma City differs from the white non-criminal's environmental image of the city.

Proposition 2b: The black criminal's environmental image of Oklahoma City differs from the black non-criminal's environmental image of the city.

Proposition 3: The white criminal's environmental image of Oklahoma City differs from the black criminal's environmental image of the city.

Proposition 4: The white non-criminal's environmental image of Oklahoma City differs from the black non-criminal's environmental image of the city.¹

Implicit in the above propositions is that the individual possesses an image of his environment which exerts influence over his spatial behavior. Interest is focused, however, on the manner in which the image affects the criminal's spatial behavior and the differences, if any, between his image and the non-criminal's image.

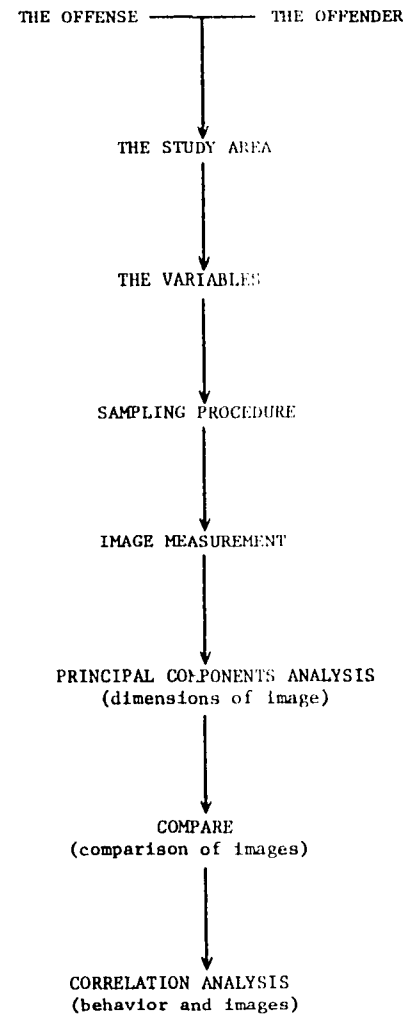
Model of Criminal Spatial Behavior

The basic methodological framework for the model is composed of several elements (Figure 2). The research design is organized in the following sequence.

¹ Although age and spatial location are assumed to influence the image, no specific propositions are put forth concerning this relationship. Instead they are controlled in the analysis.

METHODOLOGICAL FRAMEWORK

FIGURE 2



- (1) The offense
- (2) The offender
- (3) The study area
- (4) The variables
- (5) The sampling procedure
- (6) Image measurement
- (7) Principal components analysis
- (8) Comparison of images
- (9) Correlation of behavior patterns with images

The Offense

The unauthorized taking of another person's property has been deemed socially unacceptable since man first possessed personal property. When mechanisms of social control become established, offenses against property are among the first to be punished. The severity of punishment for property offenses is influenced by the value placed on private property. In terms of sanctions against property crime, "legislation will tend to erect the most formidable barriers against vulnerable segments of the society which attempt to usurp the properties of the entrenched elements."² These sanctions are a reflection of the power of those in the middle and upper classes to see that the offenses of the lower classes are punished more severely than the crimes of their own classes. Who defines an act

²Herbert A. Block and Gilbert Geis, Man, Crime and Society (New York: Random House, 1962), p. 316.

as criminal, thus, is a critical factor.

Definitions of Property Crimes

In the United States the definitions of what is a crime and what is not are derived from English common law. Clinard and Quinney, defining property crimes, state:

Theft is the term encompassing all property crimes, but the basic theft offense in English common law was larceny. This act consists of taking and carrying away goods from the possession of another without the owner's consent . . . Other property crimes that involve theft and larceny with a long history under common law are burglary and robbery. Burglary under the old common law was breaking and entering the dwelling house of another at night with intent to steal. Now this has been enlarged to include buildings other than houses and the night element has been eliminated. Robbery is regarded as aggravated larceny and consists of taking property from another with an element of force, placing the victim in some sort of fear.³

The definition of what constitutes a property crime has remained basically unchanged in modern crimes. One change that has occurred is the defining of "degrees" of seriousness of each offense. Listed below are the commonly accepted sub-types of property crime as defined by Oklahoma City statutes.

Burglary, 1st degree--breaking and entering a dwelling house at night when someone is there with intent to commit any crime or to steal.

Burglary, 2nd degree--same as above, except any building, structure, or fence, either day or night, with no one on premises.

Robbery, 1st degree--the taking of money or property by force

³Clinard and Quinney, Criminal Behavior Systems: A Typology, p. 132.

or fear; or by two or more persons.⁴

- a. with firearms
- b. with a dangerous weapon

Robbery, 2nd degree--extortion

Larceny, petty--theft of goods valued at less than \$20.00

Larceny, grand--theft of goods valued at more than \$20.00

Larceny, from a person--no lower limit on value of goods taken.⁵

Some offer more general definitions of property crime. For example Davies places property crimes into a category that he calls "offenses of dishonesty" and others "crimes of violence," "taking and driving away," "sex offenses," or "miscellaneous."⁶ Glaser makes a distinction between predatory (a victim) and non-predatory (no victim) offenses, then divides predatory crime into person predatory or property predatory.⁷

The main point of the above discussion is to illustrate that crime in general, and property crime specifically, may be defined in several ways. It may be complex, as in degrees of burglary, or simple, as in crimes of dishonesty. The offenses of burglary, robbery, and larceny in terms of the simple definition, crimes of dishonesty or simply theft, are the focus of this research.

⁴Robbery is considered to be both a crime against the person and a crime against property. See Stuart Palmer, The Prevention of Crime (New York: Behavioral Publications, 1973), p. 39.

⁵Conversation with Sgt. Acox, Oklahoma City Police Department.

⁶Martin Davies, "Offence Behavior and the Classification of Offenders," British Journal of Criminology, 9 (1969), 39-50.

⁷Daniel Glaser, Adult Crime and Social Policy (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1972), p. 15.

The Offender

Criminal behavior is divided into many categories and sub-classes. Almost any relevant work in the literature on crime and delinquency contains the researcher's own typology of criminals.⁸ Within property crime, however, a common type of offender emerges who, while staying inside the boundaries of property crime, commits most categories of offenses. This type is sometimes called the "conventional criminal"--one who commits the common types of crimes such as burglary, robbery, and larceny. The literature shows this to be a regular pattern. For example:

Within the boundaries of property offenses, conventional criminals are likely to have a diversified offense record. These offenders commit a series of offenses which may include theft, larceny, robbery, and burglary. The amount of money involved in each offense is relatively small. As a result the offenses provide a part of the offender's livelihood and they must be repeated regularly.⁹

Using different types of indexes of prior police arrest record, our study reveals that when an offender has a previous record, he is much more likely to have a criminal profile of offenses against property than against the person.¹⁰

. . . the semi-professional property offender is one who engages in various simple and uncomplicated property crimes

⁸For a discussion of criminal typologies see Clinard and Quinney, Criminal Behavior Systems, Chapter 1, and Edwin D. Driver, "A Critique of Typologies in Criminology," Sociological Quarterly, 9 (Summer, 1968), 356-73.

⁹Clinard and Quinney, Criminal Behavior Systems, p. 134.

¹⁰Andre Normandeau, "Trends and Patterns in Crimes of Robbery," (unpublished Ph.D. Dissertation, University of Pennsylvania, 1968), p. 77.

such as strong armed robberies, holdups, burglaries, and larcenies.¹¹

When typing 400 convicted Negro felons we discovered a "jack of all trades" offender which was the largest category.¹²

The difficulty with specialized typologies arises from the fact that a large variety of offenses are found in most separate criminal careers, and the combinations occur in all possible proportions . . . In the real world, the gradations and mixtures of characteristics in people are so extensive that most of our categories must be given very arbitrary boundaries. . .¹³

Many persons have contact with more than one behavior system and the systems themselves, because of cultural diffusion, interchange of members, and common background, are overlapping. Therefore, though relatively pure types exist, classifying many felons neatly according to their involvement is difficult.¹⁴

Previous writers have had little success in discriminating between the personal characteristics of larceny offenders and those convicted of breaking and entering. . . Even allowing for the fact that the larceny and breaking and entering groups comprised many different kinds of offender it seems surprising that so few differences emerged from an analysis involving almost 200 separate variables.¹⁵

. . . each of these inquiries . . . illustrates the multiplicity of circumstances which give rise to outwardly similar forms of behavior.¹⁶

¹¹Don C. Gibbons, Society, Crime and Criminal Careers (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1968), p. 246.

¹²Julian Roebuck and Ronald Johnson, "The Jack of All Trades Offender," Crime and Delinquency (April, 1962), 29.

¹³Glaser, Adult Crime and Social Policy, p. 18.

¹⁴John Irwin, The Felon (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1970), p. 7.

¹⁵Davies, "Offence Behavior and the Classification of Offenders," 40-42.

¹⁶Barbara Wootton, Crime and Criminal Law (London: Stevens, 1963), p. 21.

. . . almost any clinical type of mental disorder may be associated with any type of crime.¹⁷

It makes little difference if one's perspective is sociological, ecological or psychodynamic, the fact is that property offenders generally fluctuate between burglary, robbery and larceny and rarely commit crimes of violence. Because of this it makes sense to treat the three main categories of property criminal as one, so that the image measured will be of the average property offender. The approach is not without problems. For one, the robber commits his crimes at a slightly greater distance from his place of residence than does the burglar. Boggs found a high correlation between burglary rates and offender rates within low social rank neighborhoods and suggested that familiarity with the target may be the key explanatory factor.¹⁸ She found that the robber and the larcenist commit their crimes in the higher social rank areas adjacent to their home areas. Since the areas of criminal behavior for the robber and the larcenist are adjacent to their places of residence, familiarity should play a key role in all three types of crime. A definite distance bias is apparent for all three types of crime also, so that the consideration of all categories as one will not present a severe problem at the aggregate level.

¹⁷G. M. Woodis, "Clinical Psychiatry and Crime," British Journal of Criminology, 4 (1964), 443-60.

¹⁸Boggs, "Urban Crime Patterns."

The Study Area

The area chosen for analysis is Oklahoma City, Oklahoma. Oklahoma City, while not being one of the nation's largest cities, has its share of property crime and consequently its share of convicted property felons. Oklahoma City was selected because the area and the subject, criminal and non-criminal, were accessible to the researcher.

Like most cities, Oklahoma City has several areas that are immediately recognizable by a particular name to the average resident. Some areas are separately incorporated enclaves within the city, but most are just "parts of town." The fifteen areas selected here are thought to typify the variation in socioeconomic factors and crime within Oklahoma City. They are: (1) Nichols Hills, (2) the Far Northeast, (3) Capitol Hill, (4) Linwood, (5) the Northwest, (6) Downtown, (7) Warr Acres, (8) Forest Park, (9) Lake Hefner, (10) Paseo, (11) the Southwest, (12) the Village, (13) Crooked Oak, (14) Stockyards, (15) the Near Northeast (Map 1).¹⁹

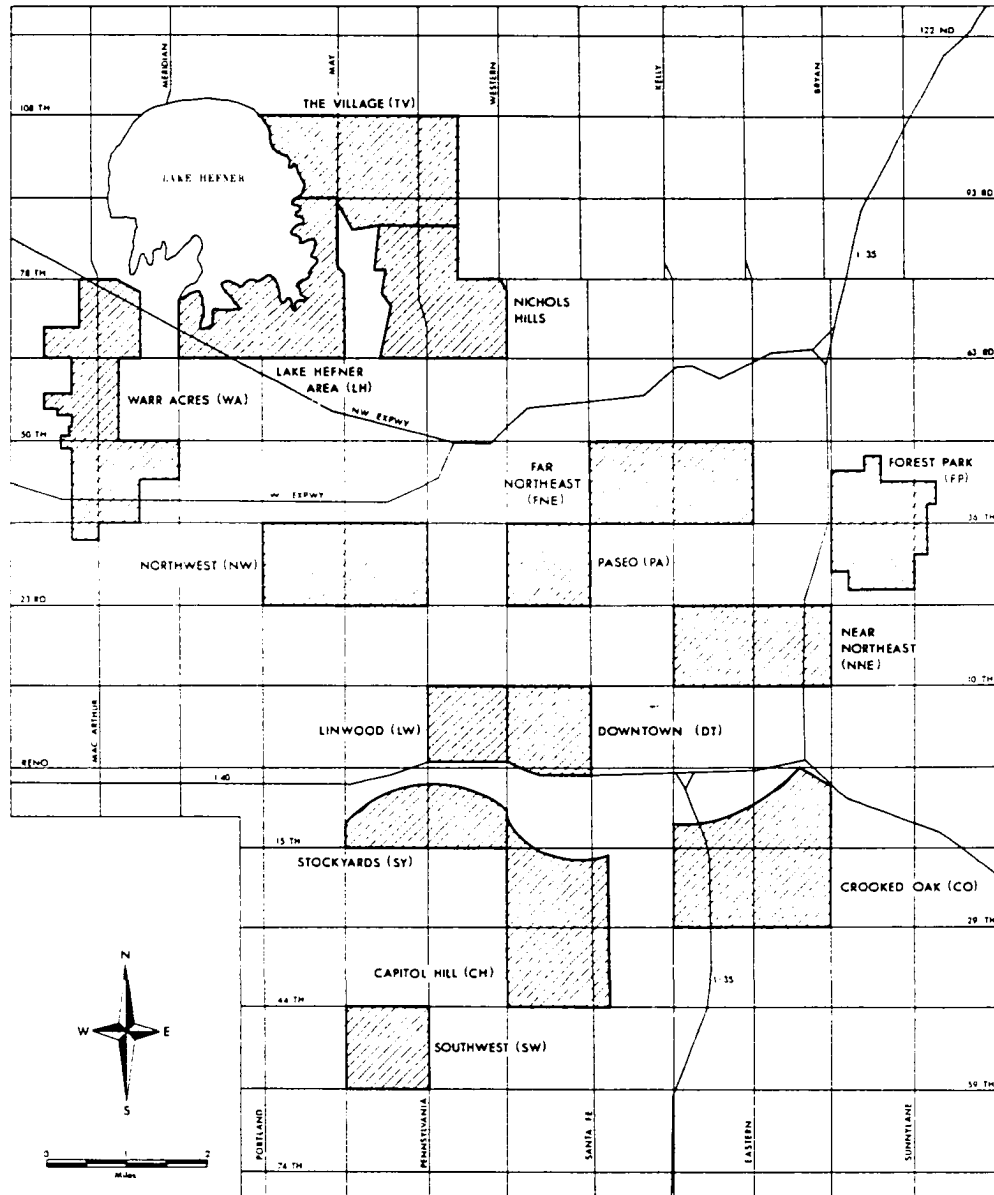
The Model Variables

The dependent variable in the first stage of the analysis (that concerning criminal and non-criminal differences) is the individual's environmental image of the city.²⁰ The image is measured by the

¹⁹A brief description of each area is included as Appendix I.

²⁰The image is the independent variable in the final phase of the study (the association between the criminal's image and his criminal behavior patterns).

MAP 1 STUDY AREAS OKLAHOMA CITY



meanings of a set of concepts. For this study the image is that of the fifteen areas of Oklahoma City. Lynch suggests that "an environmental image may be analyzed into three components: identity, structure, and meaning."²¹ Identity implies distinction from other things and recognition as a separate entity. Structure refers to the spatial or pattern relation of the object to the observer and to other objects. Finally, this object, a building, a landmark, or an area of the city must have some meaning for the observer, whether practical or emotional. Lynch concentrated primarily on the identity and structure of three cities in the United States. He admits, however, that "there are other influences on imageability, such as the social meaning of an area, its function, its history, or even its name."²² In this research the identity of areas, that is, their recognition as being distinct from other areas, is assumed. Their meanings and structure relationships are the focus of the analysis.

Characteristics of Individuals

Variables thought to be related to crime have been enumerated in many studies. They range from ecological variables such as population density, fertility ratio, employment, and per cent non-white to psychological variables such as the effects of influences of family, peers, or institutions. These studies, however, have been concerned primarily with crime causation rather than spatial behavior. Images, which are

²¹Lynch, The Image of the City, p. 68.

²²Ibid., p. 46.

associated with spatial behavior, are a function of individual specific variables. In this study, the variables thought to be related to images are: whether one is a criminal or not, race, spatial location and age.

Criminal-Non-criminal Status

The differences between the criminal's and the non-criminal's environmental image is a major research question in this study. The proposition is exploratory because little is known about criminal images. No specific prior research exists to support the proposition. The literature does present a few clues. They are, however, in a context other than criminal behavior, but they do support the underlying premise of the proposition--one's past behavior influences one's present image. Brown and Moore's work on intra-urban migration is an example. In an attempt to further understand the role of area perception on the decision to seek a new residence they adapted a mover-stayer framework. They state: "Adopting this approach leads to a consideration of ways in which movers and stayers perceive areas and the extent, if any, that they differ."²³ Earlier work by Gould and Wolpert suggest that there may be differences in the way individuals perceive areas.²⁴ These studies,

²³Brown and Moore, "The Intra-urban Migration Process," 4.

²⁴Peter Gould, "On Mental Maps," Michigan Inter-University Community of Mathematical Geographers, Ann Arbor: Department of Geography, University of Michigan Discussion Paper No. 9 (1966); Wolpert, "Behavioral Aspects of the Decision to Migrate."

while not concerned with criminal behavior, pointed the way for this research.

Race

Race and culture have been shown to be important variables in environmental images.²⁵ One of the ways that blacks and whites differ is in their spatial location within the city. The black population of any city lives in a spatially constricted area. Consequently, as a group, they view the city from a much narrower base than the white population. This spatial bias could possibly influence the analysis if not considered. Horton and Reynold's work with action spaces lends credence to this suggestion.²⁶ They found that groups residing in constricted areas tend to have less overall awareness of the city. Because of their characteristic distribution in the city, the differentiation of the races in this analysis effectively controls the location variable. In addition, it approximates Lynch's "structure" relationship in terms of the environmental image.²⁷

Age

The individual's age also influences the way he views the city.

²⁵Ladd, "A Note on the World Across the Street"; Orleans, "Differential Cognition of Urban Residents"; Harrison, "Environmental Preferences Within Urban Neighborhoods."

²⁶Horton and Reynolds, "Effects of Urban Spatial Structure on Individual Behavior."

²⁷Lynch, The Image of the City.

Images are known to change with increasing age. The individual's awareness and experiences expand and he comes to view the world from a different perspective with aging. "The knowledge that the individual's perception of social space evolves from birth to maturity seems clear."²⁸ Differences in city images due to age are not tested directly, but the influence of age is controlled.

Criminal Behavior Patterns

All studies in the Geography of Crime contain a statement concerning the unreliability of crime statistics. At issue is the fact that the amount of crime reported to the police and the actual amount are two grossly different figures.²⁹ Based on the available information, however, researchers have searched for a valid crime rate that would reveal as closely as possible the true significance of crime in an area. A brief discussion of various procedures which have been used follows.

One way of constructing a crime rate is based on the number of opportunities for each type of property crime. In the case of burglary it would include consideration of the number of businesses at risk for non-residential burglary and the number of houses at risk for residential burglary. The same at risk figures would be incorporated in analysis of

²⁸Piaget and Inhelder, The Child's Conception of Space, p. 4.

²⁹See Albert D. Biderman, et al., Report on a Pilot Study in the District of Columbia on Victimization and Attitudes Toward Law Enforcement.

the sub-types of robbery and larceny. This method has been used by Boggs for several types of major crimes.³⁰

Another procedure is to use population within an area or the entire city. Schuessler and Slatin employed this rate for their study of urban crime in several large cities.³¹ When a population based figure is used at the intra-urban scale, however, "spuriously high crime rates are computed for central business districts, which contain small numbers of residents, but large numbers of such targets as merchandise on display, unattended cars on lots, people on streets, money in circulation and the like."³²

Schmid used the absolute number of offenses known to the police and arrests (at the census tract level) for his intra-urban study. This gives simply the frequency of occurrence within a geographic area. It most closely approximates, however, the public's awareness concerning the amount of crime in a particular place. The individual criminal or non-criminal, when thinking in terms of an area, will not calculate either the number of opportunities or the population base.

For this study a measure of crime frequency is used. Rather than depend on aggregate census tract frequencies, however, data are for

³⁰Boggs, "Urban Crime Patterns."

³¹Karl Schuessler and Gerald Slatin, "Sources of Variation in U.S. City Crime, 1950 and 1960," Journal of Research in Crime and Delinquency (July, 1964), 127-48.

³²Boggs, "Urban Crime Patterns," 900.

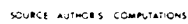
actual crimes within the study areas by the criminal sample. The places that each criminal committed his crimes are listed by street address in his file at police headquarters.³³ The approximate location of each offense committed by the criminal sample is depicted by Maps 2 and 3.³⁴ Using such a crime measure as this accomplishes two purposes. First, it indicates that the criminal has "visited" the area. It is in his awareness field. Second, it controls the race variable as an association is only sought between the black's crime and the black's image, and between the white's crime and the white's image.

Any method of calculating crime frequencies or crime rates, however, is likely to contain considerable error. With crime rates based on offenses known to the police, as mentioned above, reported crime is not a true indicator of its magnitude. Another issue is that crime rates may vary as police surveillance varies simply because more crime is known, when in reality crime has remained unchanged. Many crimes, also, are not reported for various reasons ranging from the feeling that the property cannot be recovered to the fact that occasionally the victim and the offender are acquainted and settle privately.

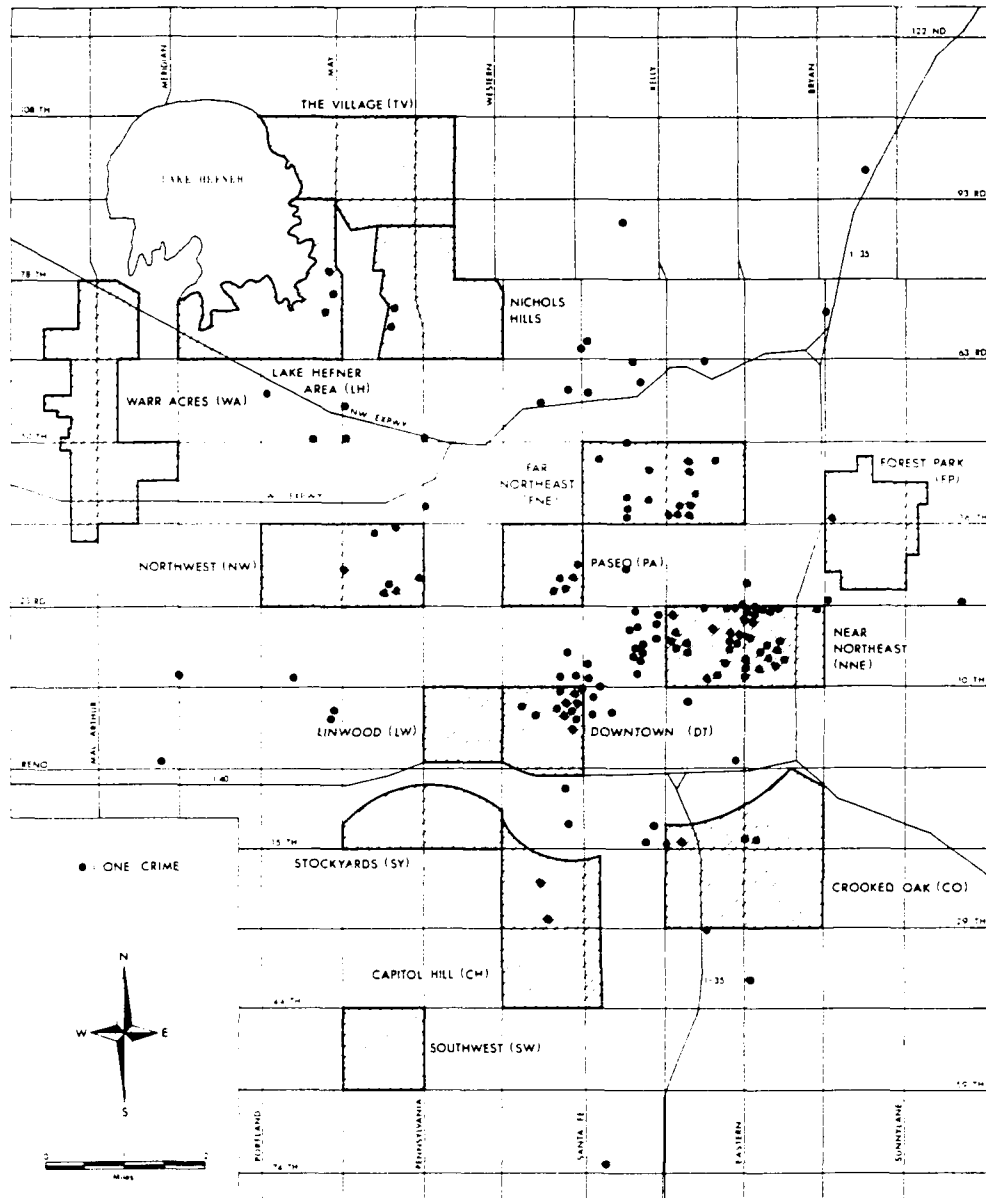
Crime frequencies in an area are influenced by the size of the area. The areas used in this study do vary somewhat in size. For the

³³The author wishes to acknowledge the kind assistance of Major Robert Wilder, Oklahoma City Police Department, for making these data available.

³⁴The occurrence frequency within each study area is the dependent variable in the second phase of analysis.



MAP 3 CRIMES BY BLACKS



above reasons, however, the problem is no more severe than that associated with unreliable crime statistics. Another possible influence in this study is that of plea bargaining and charge reduction. If property offenders and their offenses are critically examined in terms of the actual crime they committed and the crime to which they eventually pled guilty or were convicted of, one might find considerable variation.³⁵

The Sampling Procedure

To investigate the research proposition, two groups--criminals and non-criminals--were sampled.

The Criminal Sample

The criminal sample was based on known property offenders currently residing in three of the state's correctional institutions.³⁶ Records of all inmates at each institution were reviewed and those con-

³⁵For a discussion of plea bargaining, clearance rates, and charge reduction (e.g., from burglary 1 to burglary 2), see Jerome Skolnick, Justice Without Trial (New York: John Wiley and Sons, Inc., 1966); Abraham Blumberg, Criminal Justice (Chicago: Quadrangle Books, 1970); Jonathan Casper, American Criminal Justice (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1972).

³⁶The author wishes to gratefully acknowledge the assistance of Mr. John Grider, Acting Director, Oklahoma State Department of Corrections, for granting permission. In addition, the author would like to thank Mr. Albert Babek, Associate Warden, Granite State Reformatory, Mr. E. L. Imboden, Superintendent, Lexington Regional Treatment Center, and Mr. Dan McCullough, Counselor, Oklahoma City Work Release Center, for their assistance.

victed in Oklahoma City of burglary, robbery, and larceny were selected.³⁷ Those convicted of other property crimes such as auto theft, shoplifting, and larceny from person were excluded.

All property offenders available for analysis were called together for a meeting. After a short general presentation about the research, volunteers were requested to participate in the study. Those agreeing to take part were told that the purpose of the study was to find out how they feel about certain areas of Oklahoma City. The inmates were told they were selected because they represented a convenient concentration of individuals who were familiar with Oklahoma City. They were not told that they were selected because they are criminals.

Some time was spent in informal conversation with the men following each session. Most seemed to have given their true feelings about the study areas. The general problem of prison research is discussed by Letkeman. He states:

The two most persistent criticisms directed toward prison research focus on the representativeness of the prison population of criminals in general, and on the validity of the material gathered. . . . The validity consideration may stem in part from the prevailing myth that the prisoner is without moral restraint and not to be trusted, plus knowledge that the prisoner has been involved in activities that he has an interest in keeping secret.³⁸

The question of the representativeness of the prison population

³⁷Most of those selected had prior property crime convictions in addition to the one for which they are serving time.

³⁸Letkeman, Crime as Work, p. 172.

of criminals in general may never be resolved, but validity is another matter. It is no more a problem here than in other types of research and is partially solved by the same procedure as other studies--the use of averages which smooth over individual idiosyncrasies. Most of the inmates, in fact, seemed rather proud of their line of "work" and welcomed the opportunity to talk freely about it to someone who is not a "bull," a "key," or a "shrink." It must be admitted that the property criminal has several occupational vexations not immediately perceptible to one who chose another line of work.

Questionnaires were screened to remove those who could not read or who did not understand the task. Out of a total sample of 100, 83 were analyzed. The profile of the criminal sample is given in Table 1.

TABLE 1
THE CRIMINAL SAMPLE

	<u>Black</u>	<u>White</u>	<u>Total</u>
Burglars	26	26	52
Robbers	9	15	24
Larcenists	<u>3</u>	<u>4</u>	<u>7</u>
	38	45	83

Age Distribution

17-25	60
26-35	14
36-45	3
46+	6

Source: Author's calculation.

The Non-criminal Sample

The collection of a matching non-criminal sample was accomplished by a stratified sampling procedure. First, the criminal's last address in the city was coded to a particular census tract. Second, an individual of an approximately similar age as the criminal was selected from that tract. The method in which the sample was obtained consisted of randomly selecting a block within the tract and then searching for anyone of the appropriate age who would submit to the interview.

Non-criminal subjects were given instructions almost identical to those of the criminals. They were told that the purpose was to obtain information on how they feel about certain areas of Oklahoma City and that an average mental map would be constructed. The same interview schedule was utilized. They were not told until after the interview that they were part of a comparison group for the criminal sample. After screening, 79 of 80 were analyzed.³⁹ The profile of the non-criminal sample is shown in Table 2.⁴⁰

Image Measurement

A Semantic Differential was utilized to measure the criminal

³⁹One interviewee mentioned that he had just been released from the Washington State Penitentiary. All subjects were asked following their interview if they had ever been arrested for a property crime. Fortunately, only one had.

⁴⁰This researcher personally collected the white non-criminal sample. Two black interviewers, Mr. Darrell Troutt and Mr. Jerry Johnson, were employed to sample the black non-criminal on the belief that more valid responses could be obtained.

TABLE 2
THE NON-CRIMINAL SAMPLE

Black	38
White	<u>41</u>
Total	79

<u>Age Distribution</u>	
17-24	53
26-35	20
36-45	3
46+	3

Source: Author's calculation.

and non-criminal image of Oklahoma City (see Appendix II).⁴¹ The Semantic Differential is a technique utilized in a variety of measurement procedures. Heise discussed the technique as follows:

The Semantic Differential (SD) measures people's reactions to stimulus words and concepts in terms of ratings on bi-polar scales defined with contrasting objectives at each end. An example of a SD scale is:

	Extremely		Very		Slightly		Neutral		Slightly		Very		Extremely	
Good	—		—		—		—		—		—		—	Bad

A scale like this one measures directionability of a

⁴¹Charles Osgood, George Suci and Percy Tannenbaum, The Measurement of Meaning (Urbana: The University of Illinois Press, 1957).

reaction (e.g., good versus bad) and also intensity (slight through extreme). Typically, a person is presented with some concept of interest, e.g., Red China, and asked to rate it on a number of such scales. Ratings are combined in various ways to describe and analyze the person's feelings.

A number of basic considerations are involved in SD methodology:

- (1) Bipolar adjective scales are a simple, economical means for obtaining data on people's reactions. With adaptations, such scales can be used with adults or children, persons from all walks of life, and persons from any culture.
- (2) Ratings on bipolar adjective scales tend to be correlated, and three basic dimensions of response account for most of the covariation in ratings. The three dimensions, which have been labeled Evaluation, Potency, and Activity (EPA), have been verified and replicated in an impressive variety of studies.
- (3) Some adjective scales are almost pure measures of the EPA dimensions; for example, good-bad for evaluation, powerful-powerless for potency, and fast-slow for Activity. Using a few pure scales of this sort, one can obtain, with considerable economy reliable measures of a person's overall response to something. . .
- (4) EPA measurements are appropriate when one is interested in affective responses. The EPA system is notable for being a multivariate approach, applicable to any concept or stimulus, and thus it permits comparison of affective reactions on widely disparate things.⁴²

One element of the standard procedure in the use of the SD which should be emphasized is that the ratings usually have been averaged to make group comparisons or to determine the common "meaning" of the concepts which are rated. This is the case in this study.

The Semantic Differential is chosen for a number of reasons. Ideally, a technique to measure images must possess at least three

⁴²D. R. Heise, "Some Methodological Issues in Semantic Differential Research," Psychological Bulletin, 72, 6 (1969), 406-22.

characteristics. First, it must be theoretically sound in terms of measuring what the researcher wants to measure. Second, it must be simple to use and understand, in addition to being difficult to "out smart." And, third, it must logically lead to procedures for its analysis. The SD meets these criteria.

Theoretically, the SD is in agreement with Kelly's personal construct theory.⁴³ He postulates that individuals arrange features of their perceived environment by discrimination on the basis of its attributes. The attributes are considered to be arranged by each person into bipolar scales which express meaningful contrasts. This has also been suggested by Langer.⁴⁴ Since personal constructs are unique to the individual, the most common way of operationalizing Kelly's ideas has been via the Repertory Grid Technique. This procedure requires a separate conversation with each subject in order to determine his personal constructs. These are then arranged on a Semantic Differential and the individual asked to respond to a set of concepts. While this approach contains much "person sensitivity," it loses the critical feature of standardization which allows for individuals to be grouped. Without standardization there is no basis for mathematically analyzing even individual similarities. For comparisons or hypothesis testing most

⁴³Kelly, The Psychology of Personal Constructs.

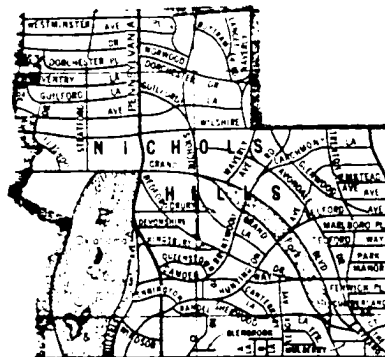
⁴⁴Susanne Langer, Mind: An Essay on Feeling (Baltimore: The Johns Hopkins Press, 1967), pp. 195-96.

recommend applying a common set of scales to all subjects.⁴⁵ Precautions can be taken, however, to ensure that all or most scales have meaning to the subjects. In this study a pilot test of the SD on a group of inmates at one institution accomplished this purpose.⁴⁶ Each bipolar adjective pair was discussed separately to check for relevance.

In this study, the concepts used on the SD are the 15 study areas within Oklahoma City. Each area is presented with its generally accepted name accompanied by a small map at the top of each page. (Map 4 is an example.) The purpose of the map is to assist the subject in identifying the area and to enable him to locate specific reference points or landmarks. A large map showing the area's relative location is also provided.

MAP 4

NICHOLS HILLS



⁴⁵Harrison and Sarre, "Personal Construct Theory in the Measurement of Environmental Images," 370.

⁴⁶The pilot test was conducted at the Oklahoma City Work Release Center.

Immediately below each map are 15 bipolar scales. These are the same for all areas. The selection of items for inclusion on the SD was the result of a three-fold process. First, those recommended by Osgood were examined and some were chosen.⁴⁷ Second, literature containing criminal terminology was examined and some descriptive adjectives selected. Those selected were pilot tested and subsequently used for the sample (Table 3).

TABLE 3
SEMANTIC DIFFERENTIAL SCALES

good	. .	bad
familiar	. .	unfamiliar
risky	. .	safe
rich	. .	poor
low property crime	. .	high property crime
honest	. .	dishonest
difficult	. .	easy
calm	. .	violent
easy mark	. .	hard mark
cheap	. .	expensive
livable	. .	not livable
hostile	. .	friendly
exciting	. .	dull
undesirable	. .	desirable
strong police protection	. .	weak police protection

Polarity was mixed to guard against an individual making all his responses on one side of the page or the other. This did occur, how-

⁴⁷Osgood, et al., The Measurement of Meaning.

ever, in some cases and the questionnaire was eliminated.

One pair--easy mark-hard mark--was included to approximate the perceived ease or hardness of committing a crime in a particular area. The word mark was defined as follows:

N.1. An easy victim; a ready subject for the practices of a confidence man, thief, beggar, etc.; a sucker. Mainly underworld, carnival, circus and hobo use, but universally known. 2. Among carnival workers, any outsider or member of the local community. 3. A place from which it is easy to obtain food or money by deception, thievery or begging. Underworld and hobo use. 4. The amount of money taken in a robbery. v.t. To seek or find a person or place worth robbing. Underworld use.⁴⁸

Synonyms which could have been used in place of "mark" are "score," "hit," or "target." During the data collection sessions an occasional inmate would ask in a laughing manner what "mark" meant. He was told that it meant what he thought it meant. The non-criminal sample was told the specific context in which to use the easy mark-hard mark scale. All other bipolar scales were readily understood by both groups. In terms of validity, then, easy mark-hard mark may contain the greatest error. Since this researcher represented no threat to the criminal sample, however, it is thought that the scale contains enough information to justify its use.

⁴⁸Dictionary of Slang (New York: Bantom Books, 1972).

Data Analysis Procedures

Analytical procedures employed to accomplish the goals of the study are: (1) principal components analysis to derive dimensions of attributes used in environmental evaluation, (2) a set of dimensional comparison techniques to investigate group differences--COMPARE and the congruency statistic, and (3) simple and multiple correlation analysis to determine the nature of the association between criminal spatial behavior and environmental images.

Principal Components Analysis

Semantic Differential data logically lead to some form of dimensional analysis because there is a high degree of correlation among certain bipolar adjective pairs. Kerlinger states: ". . . although everyone sees things a bit differently, sometimes very differently, there must be some common core of meaning in all concepts."⁴⁹ This common core of meaning, however, may vary as Lynch says: "Each individual creates and bears his own image, but there seems to be substantial agreement among members of the same group."⁵⁰ Propositions 2 through 4 are concerned with group differences in environmental images. Principal components analysis is used to derive dimensions in semantic space of the attributes used for environmental evaluation and to determine

⁴⁹F. N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1964), p. 564.

⁵⁰Lynch, The Image of the City, p. 7.

the relative positions of the study areas in terms of the dimensions.

Semantic space is the individual's representation of word meanings which he uses as a reference framework for perceiving his environment. Some word meanings are more similar to the individual than others; those that are will be located close to one another in semantic space. When several words share similar locations a dimension is formed ranging from words to their logical opposites. The dimensions, in turn, are employed to add structure to the evaluation of the environment.

Phenomena, or in this case areas, are located in perceptual space relative to the reference dimensions. The exact location of an area is determined by its dimension (factor) score. To determine the score for an area on a dimension, the area's data on each SD scale is multiplied by the dimension loading for that scale. The sum of these loading-times-data-products for all scales yields the score. This summation will give areas high (or low) scores if their values are high (or low) on the scales involved with a dimension. Since dimension scores are standardized to mean zero and standard deviation of unity, comparisons among areas are facilitated.

Comparisons: Evaluative Dimensions

Group comparisons are accomplished by two techniques--an algorithm developed by Shonemann and Carroll for comparing total dimensional structure and the congruency statistic which performs

dimension by dimension comparisons.⁵¹

COMPARE, developed by Shonemann and Carroll, is a least squares technique for comparing a given matrix A to a given matrix B. Here, matrices A and B are the dimension loadings for the group. The algorithm rigidly rotates one matrix to the other and gives several goodness of fit measures. The statistic $\text{tr}E'E/pq$, which is the sum of the squared error ($\sum \sum e^2$) divided by a number of scales times the number of dimensions is used to compare total dimensional fits. The technique has a major shortcoming, however. There are no published tables for comparing the absolute magnitudes of the goodness of fit measure. Instead one examines relative differences in goodness of fit between matrices, with $\text{tr}E'E/pq = 0$ being a perfect fit.

The second technique used to compare groups is the congruency statistic.⁵² This statistic compares dimension by dimension and ranges

⁵¹Peter Schonemann and Robert Carroll, "Fitting One Matrix to Another Under Choice of a Central Dilation and a Rigid Motion," Psychometrika, 35, 2 (June, 1970).

⁵²The coefficient of congruence is computed as:

$$Clq = \sum_{j=1}^m \alpha_{j1} \alpha_{jq} / \left[\left(\sum_{j=1}^m \alpha_{j1}^2 \right) \left(\sum_{j=1}^m \alpha_{jq}^2 \right) \right]^{1/2}$$

where: α represents dimension loading of variable j on dimensions 1 and q.

from -1.0 to 1.0. It is interpreted similar to a Pearson correlation coefficient.

Correlation Analysis

To investigate the association between criminal behavior patterns and environmental images asserted by Proposition 1, the dimensions of image are correlated with actual crime frequencies by the criminal sample in the study areas. Each image dimension separately and then all intra group dimensions are correlated with crime frequencies for that group. Correlation analysis yields the percentage of variance explained in criminal behavior patterns by the group's environmental images. From these, conclusions about the associations between image and behavior have been derived.

CHAPTER IV

COMPARISON OF IMAGES

The model (page 19) used in this research is based on the supposition that criminal behavior is a special case of human behavior. As such the criminal defines certain aspects of his environment to suit his particular goals and purposes. His image of city space may, therefore, have a great deal of commonality with the non-criminal's image, the normative image for his social class. The criminal sample is thought to be representative of the population of Oklahoma City's property offenders. The sample represents a broad cross section of spatial location, ages, and perhaps values within the lower socioeconomic classes. The matching non-criminal comparison group exhibits some of these same characteristics, hence, their image should in many ways approach the typical image of Oklahoma City's lower class male citizen. Taking the perspective of a typical image will allow for the characteristics that the criminal and non-criminal have in common to be easily seen, plus allow for any special or deviant characteristics relating only to criminals to emerge as different.

In this chapter interest is focused on how the criminal and non-criminal evaluate their environments. The point was made in Chapter II

that both employ the same basic processes of evaluation, but that their purposes or behavioral contexts differ. In terms of basic processes, Gestalt theory suggests that phenomena are perceived as inviting or repelling as entities.¹ Field theory suggests that evaluation is based on positive and negative valences on a surface called the "life space."² Kelly maintains that the features of the environment are perceived on the basis of their attributes and that these attributes tend to cluster into dimensions which channelize behavior.³ Valences of the life space are area specific, but their organization is based on psychological principles. These psychological principles are in many ways analogous to the structural components of semantic space which is composed of dimensions used for evaluating the environment. While it is not possible to know what the psychological principles are that organize the life space, it is possible to examine the dimensions used by the criminal and the non-criminal in their evaluation of the study areas. The comparisons of these dimensions and how, if any, they differ between criminals and non-criminals is the subject of the following discussion.

Dimensions of Evaluation: Criminal and Non-Criminal Populations

Environmental images of Oklahoma City were obtained for several groups. At the most general level is the image of all criminals

¹Asch, "Gestalt Theory."

²Lewin, Field Theory in the Social Sciences.

³Kelly, The Psychology of Personal Constructs.

and all non-criminals. Any differences within the groups which obtain from race or spatial location are smoothed over and may be biased in favor of a particular group. Only the gross manifestations of each group's perceptual dimensions are evident.

Tables 4 and 5 show the perceptual dimensions obtained from principal components analysis which were used in evaluating the study areas for all criminals and all non-criminals respectively.⁴ Each

⁴Although both two and three factor solutions were obtained the decision has been made to stress the two factor configurations. The rationale is as follows. The decision concerning the number of dimensions to interpret or rotate in a principal components analysis is not guided by a clearly defined rule. Convention is to utilize Kaiser's criterion which specifies that eigenvalues greater than 1.0 are significant in terms of a dimensions' explanatory power ("The Varimax Criterion for Analytic Rotation in Factor Analysis," Psychometrika, 23 (1958), 187-200). The rationale is that a factor with an eigenvalue of less than 1.0 explains less variance than an original variable would explain. In this study, however, the concern is not with low eigenvalues, but with eigenvalues greater than 1.0 which explain considerably less variance than those for previous dimensions. The decision to rotate only two factors was based on the "discontinuity criterion" plus certain theoretical considerations discussed below. Although the discontinuity criterion applies primarily to the number of factors to interpret, its basic principle seems applicable here. This criterion suggests that factors should be interpreted up to the point where proportion of explained variance versus factors displays a sharp decline in variance explained (see R. J. Rummel, Applied Factor Analysis (Evanston: Northwestern University Press, 1970)). In almost every case the explained variance dropped appreciably after two dimensions were extracted. Generally this third dimension was constructed from the scale representing familiarity, plus one or two other scales depending upon the group. Several researchers, most notably Boggs, have suggested that familiarity with opportunities for property crime may be a key explanatory variable in criminal spatial behavior ("Urban Crime Patterns"). Familiarity alone, however, may not be sufficient explanation. The discovery of as many other considerations as possible which share common variance with familiarity and which might influence the criminal's spatial decision will be theoretically productive. Although the full impact of familiarity is not realized, the additional information gained appears

dimension is composed of a cluster of environmental attributes. From these dimensions one may receive an indication of the relevant criteria upon which they evaluate areas. It should be recalled that in a general evaluative procedure no concepts or items are provided for organizing the individual's image. Instead concern is directed to the manner in which the individual or group organizes environmental attributes.

On two dimensions non-criminals differentiate between those attributes which represent general livability (I) and those which are interpreted as being surrogates for general socio-economic status (II). In terms of explaining the variance (46.1 percent) the first is the strongest. Dimension II, on the other hand, explains 35.4 percent of the variance.⁵ The strength of dimension I indicates this group's evaluation of areas is weighted by general livability. The existence of an independent socio-economic status dimension suggests that livability is not equated with the wealth of an area. In fact the group is ambivalent about the relationship between socio-economic status, general livability and goodness.

The criminal, in contrast, weights dimension I with attributes that represent both socio-economic status and livability (67.6 percent of

worth the sacrifice. The three dimensional solution will be examined briefly at the appropriate times, however, so that any distortion resultant from the constrained rotation will not be concealed.

⁵The third dimension in the all non-criminal's semantic space is composed of the scales exciting, familiar, and the perceived ease that a criminal would have in stealing in a particular area. With the exception of familiar, a more independent concern for the non-criminal, the scales load on a two dimensional rotation.

TABLE 4

ALL CRIMINALS: ROTATED DIMENSION LOADINGS^a

Variables	Two Dimensional Solution		Three Dimensional Solution		
	I	II	I	II	III
Good	.988		.735	.653	
Familiar		-.585			-.921
Safe	.980		.808	.505	
Rich	.923		.899		
Low Crime	.886		.832		
Honest	.930		.512	.797	
Easy	.694	-.553		.912	
Calm	.970		.759	.595	
Hard Mark		.869			.745
Expensive	.951		.870		
Livable	.946		.663	.657	
Friendly	.869			.817	
Exciting	.549			.623	
Desirable	.968		.715	.622	
Strong Police	.664		.926		
<hr/>					
% Explained					
Variance	67.6	12.4	43.3	33.4	11.7
Eigenvalues	10.1	1.8	6.4	5.0	1.7

^aNegative loadings indicate opposite adjective from one shown.

Source: Author's calculations.

TABLE 5

ALL NON-CRIMINALS: ROTATED DIMENSION LOADINGS^a

Variables	Two Dimensional Solution		Three Dimensional Solution		
	I	II	I	II	III
Good	.698	.679	.588	.777	
Familiar			-.621		.566
Safe	.845		.861		
Rich		.844		.922	
Low Crime	.607	.740	.533	.799	
Honest	.912		.809		
Easy	.804		.917		
Calm	.655	.734	.593	.786	
Hard Mark		.776		.514	-.713
Expensive		.843		.918	
Livable	.810		.814		
Friendly	.959		.850		
Exciting	.745				.833
Desirable	.840	.525	.788	.592	
Strong Police		.888		.959	
<hr/>					
% Explained					
Variance	46.1	35.4	40.2	39.4	11.7
Eigenvalues	6.9	5.3	6.0	5.9	1.7

^aNegative loadings indicate opposite adjective from one shown.

Source: Author's calculations.

the variance). Environmental features which represent socio-economic status are highly interwoven with those representing general livability. Since the criminal's general evaluative structure is based on a combination of socio-economic and livability considerations, his second independent dimension is dissimilar to the non-criminal's second dimension. Although this dimension explains only 12.2 percent of the variance, it is entirely different from any non-criminal dimension.⁶ The perceived easiness of committing a crime is linked with the notion of familiarity in the criminal's evaluative process. Since familiarity did not load on either of the non-criminal's dimensions, thus, it appears to be a more important concept for the criminal. It seems, then, that familiarity must be a key element in the criminal's evaluation of environment.

Although the criminal's and the non-criminal's total dimensional structure appear to be quite different, the trE'E/pq statistic (0.0341) shows this not to be the case. The reason for this derives from the variances explained by each dimension. The criminal's first dimension explains a sizable amount of variance in his evaluative structure. This first dimension is composed of many of the same attributes which make up the non-criminal's first dimension plus many of those which load on the non-criminal's second dimension. Comparing the two group's structures dimension by dimension makes this clear (Table 6). There is

⁶ The third dimension for all criminals is constructed from unfamiliar and hard mark. Both load on the two dimensional solution.

TABLE 6

DIMENSIONAL CONGRUENCY: ALL CRIMINALS--
ALL NON-CRIMINALS

		All Non-criminals	
		I	II
All Criminals	I	0.9443	0.8523
	II	0.0599	0.5489

Source: Author's calculations.

almost total agreement between the groups on the first dimension and strong agreement between criminal dimension I and non-criminal dimension II. Between the criminal dimension containing familiarity (II), however, and the non-criminal's first dimension there is no association. The criminal's second dimension and the non-criminal's second dimension show moderate agreement. Since the criminal's first dimension is so strongly associated with both non-criminal dimensions, the overall structural agreement is high.

Dimensions of Evaluation: Groups

Evaluation of area is influenced by a number of factors. These have been discussed in Chapter II. The four groups, white criminals, white non-criminals, black criminals, and black non-criminals, are internally homogeneous in terms of a number of these influences. Within each group, race, age, and spatial location have been controlled. The two criminal groups share a similar goal--crime. When these influences

are controlled differences among groups resulting from criminality are shown to emerge.

Two dimensional structures for the four distinct groups are shown in Tables 7, 8, 9, and 10.⁷ All groups possess a dimension composed, in varying degrees, of considerations reflecting general livability. The environmental attributes clustering with scales approximating livability, however, are not the same for all groups. This implies that when evaluating environments each group sees that environment from a different, albeit slightly different, perspective in terms of livability. The lower income white non-criminal (Table 8), for example, does not equate livability with socio-economic status, while the lower income black non-criminal (Table 10) applies a dual standard of evaluation. His loading for the livability scale is moderate on both dimensions.

The lower class white non-criminal is ambivalent concerning which dimension contains his evaluation of the goodness of environments. He is not quite sure whether rich means good or whether attributes reflecting livability are good. The lower class black non-criminal, in contrast, sees these evaluations as one and the same. To the black, socio-economic status and goodness, and livability, to a degree, are almost unidimensional.

⁷ All scales loading on dimension III for the criminal groups load on a two dimensional solution. All scales except familiarity load on the non-criminal's two dimensional rotation. Overall, because some scales switched dimensions during the transition, the black sample appears to have suffered slight distortion.

TABLE 7

WHITE CRIMINALS: ROTATED DIMENSION LOADINGS^a

Variables	Two Dimensional Solution		Three Dimensional Solution		
	I	II	I	II	III
Good	.926		.874		
Familiar		.632			.906
Safe	.955		.924		
Rich	.972		.962		
Low Crime	.917		.911		
Honest	.751	.533	.664	.670	
Easy	.555	.744		.857	
Calm	.957		.916		
Hard Mark		-.950		-.916	
Expensive	.988		.982		
Livable	.875		.813		
Friendly	.744	.608	.654	.695	
Exciting	.580	.658		.709	
Desirable	.925		.872		
Strong Police	.616		.635		.718

% Explained					
Variance	61.5	22.5	55.5	26.8	9.9
Eigenvalues	9.2	3.3	8.3	4.0	1.4

^aNegative loadings indicate opposite adjective from one shown.

Source: Author's calculations.

TABLE 8

WHITE NON-CRIMINALS: ROTATED DIMENSION LOADINGS^a

Variables	Two Dimensional Solution		Three Dimensional Solution		
	I	II	I	II	III
Good	.773	.620	.805	.544	
Familiar					.951
Safe	.790	.597	.854	.501	
Rich		.876	.543	.819	
Low Crime	.828		.861		
Honest	.921		.938		
Easy	.909		.951		
Calm	.748	.622	.822	.528	
Hard Mark		.922		.909	
Expensive		.866		.838	
Livable	.837		.901		
Friendly	.933		.952		
Exciting	.778		.721		
Desirable	.810	.558	.879		
Strong Police		.849		.858	

% Explained					
Variance	50.4	34.9	54.9	28.7	8.6
Eigenvalues	7.6	5.2	8.2	4.3	1.2

^aNegative loadings indicate opposite adjective from one shown.

Source: Author's calculations.

TABLE 9

BLACK CRIMINALS: ROTATED DIMENSION LOADINGS^a

Variables	Two Dimensional Solution		Three Dimensional Solution		
	I	II	I	II	III
Good	.873		.868		
Familiar		.830			.893
Safe	.971		.917		
Rich	.931		.977		
Low Crime	.921		.893		
Honest	.800		.672	.692	
Easy		.671		.886	
Calm	.915		.843		
Hard Mark	.804		.745		
Expensive	.956		.984		
Livable	.885		.888		
Friendly		.835		.808	
Exciting		.836			.967
Desirable	.702	.549	.709		
Strong Police	.803		.836		
<hr/>					
% Explained					
Variance	57.0	23.0	53.7	17.9	16.8
Eigenvalues	8.5	3.5	8.0	2.6	2.5

^aNegative loadings indicate opposite adjective from one shown.

Source: Author's calculations.

TABLE 10

BLACK NON-CRIMINALS: ROTATED DIMENSION LOADINGS^a

Variables	Two Dimensional Solution		Three Dimensional Solution		
	I	II	I	II	III
Good	.866		.839		
Familiar					-.689
Safe	.552				.856
Rich	.965		.984		
Low Crime	.980		.967		
Honest	.666	.669	.571	.695	
Easy					.917
Calm	.933		.913		
Hard Mark		-.727		-.718	
Expensive	.956		.965		
Livable	.694	.505	.568	.513	
Friendly		.891		.892	
Exciting		.797		.830	
Desirable	.809	.539	.693	.562	
Strong Police	.792		.888		
<hr/>					
% Explained					
Variance	48.2	24.4	43.0	25.4	17.8
Eigenvalues	7.2	3.6	6.4	3.8	2.6

^aNegative loadings indicate opposite adjective from one shown.

Source: Author's calculations.

Both criminal groups (Tables 7 and 9) weight dimension I with varying combinations of socio-economic status and livability attributes. Their evaluations, as the black non-criminal, may be based on "us" versus "them" or the "haves" and "have-nots." In fact, there is a striking similarity on the socio-economic status--livability dimensions between all three groups. The white non-criminal is the exception to this general pattern. The white non-criminal, thus, stands alone in his evaluative structure on dimension I and is different in this respect, therefore, from the white criminal.

Other important differences and similarities are apparent when dimension II is examined for all groups. The white non-criminal's second dimension represents socio-economic status. The other three groups are similar to one another on dimension II, but with some noteworthy exceptions. Only for criminals, both black and white, does familiarity play an important role. This tends to support Boggs' suggestion that familiarity is a major influence in the criminal's decision process.⁸ When evaluating environments within his behavioral context, this notion may spell the difference between success and failure in a business where the stakes are high. For the criminal of both races, familiarity is associated with excitement, which coincides with Matza and Sykes' contention that the lower class offender is engaged in a quest for excitement, thrills, and kicks.⁹

⁸Boggs, "Urban Crime Patterns."

⁹Matza and Sykes, "Juvenile Delinquency and Subterranean Values."

On the white criminal's second dimension familiarity is also associated with the perceived ease or hardness of stealing. In other words, familiarity is related to the perceived satisfaction of his criminal goals. The dimension, thus, appears to be a goal directed activity dimension of his environmental image.

The black criminal, on the other hand, relates the ease of stealing to general socio-economic status considerations. When considering where to satisfy his goals he, thus, considers attributes from both dimension I and dimension II. Dimension II, however, appears more related to short-term activities, while dimension I differentiates the anticipated ease of stealing. The black non-criminal's second dimension shares some qualities of the black criminal's in terms of activities. Since both reside in the same small area, their activity spaces would be quite similar as would their goal directed activity dimensions. Goal directed images permit purposive mobility in the environment. The goal directed image will be utilized differently depending upon one's goals. If they are criminal, this image will color the evaluation of the environment's goal satisfying power.

Comparisons

To illustrate relationships between groups, comparisons are made between all possible groups.

White Criminals Versus
White Non-Criminals

There seems to be general agreement in terms of overall dimensional fit between white criminals and white non-criminals ($\text{trE'E}/pq = 0.0477$).¹⁰ The white, criminal or non-criminal, possesses a very similar construction of semantic space. The congruency statistics substantiate this suggestion (Table 11). The major difference is between

TABLE 11
 DIMENSIONAL CONGRUENCY: WHITE CRIMINALS--
 WHITE NON-CRIMINALS

		White Non-criminals	
		I	II
White Criminals	I	0.9280	0.8396
	II	0.7319	0.1626

Source: Author's calculations.

the second dimension of each. Although the white criminal's and the white non-criminal's overall general images are very similar, the criminal's goal directed image stands out as distinctly different.

Black Criminals Versus
Black Non-Criminals

The black criminal and the black non-criminal exhibit a larger difference in total structural fit than for the white comparison. The

¹⁰See page 87.

triple, p -statistic is 0.0319. This value, however, still does not indicate a large difference between the groups. Schonemann and Carroll refer to a fit of 0.840 as "fairly good."¹¹ The congruence statistics for dimension by dimension comparisons are shown in Table 12. The black criminal

TABLE 12
DIMENSIONAL CONGRUENCY: BLACK CRIMINALS vs.
BLACK NON-CRIMINALS

		Black Non-Criminals	
		I	II
Black Criminals	I	0.9537	0.5403
	II	0.1519	0.8160

Source: Author's calculations.

and non-criminal are very much alike on the general socio-economic dimension and on the activity dimension. Both groups appear to use a similar reference framework for evaluating environments. In addition to being of the same race, they are, unlike whites, from the same constricted environment. That both see socio-economic status as nearly unidimensional, with them on the bottom, explains their similarity on dimension I. The size of their living area would explain their similarity on the activity dimension as both would share very similar activity spaces. The non-criminal black group is more similar to the white group on dimension II.

¹¹ Schonemann and Carroll, "Fitting One Matrix to Another Under a Choice of a Central Dilation and a Rigid Motion."

criminal's second dimension, however, seems to be more of a secondary livability dimension, while the criminal's appears more related to his illegitimate activities.

White Criminals Versus
Black Criminals

This comparison, like the all criminal and all non-criminal comparison, crosses racial boundaries and includes many diverse spatial locations. The groups, however, have one major characteristic in common, they are criminals. The trE'E/pq statistic is 0.0974. Although this is the largest difference thus far, the total dimensional fit is still fairly good. When a dimension by dimension comparison is made additional similarities emerge (Table 13). All criminals appear to utilize

TABLE 13
DIMENSIONAL CONGRUENCY: WHITE CRIMINALS--
BLACK CRIMINALS

		Black Criminals	
		I	II
	I	0.9036	0.4515
White Criminals	II	0.1939	0.8001

Source: Author's calculations.

very similar evaluative criteria. Their semantic structures for socio-economic status evaluations and for activities are nearly alike. Although

the black criminal's goals are guided by a combination of dimension I and II, and the white's more so by dimension II alone, they appear to arrange their evaluative criteria in essentially the same manner.

White Non-Criminals Versus
Black Non-Criminals

The comparison between white non-criminals and black non-criminals was expected to show considerable differences. The trE'E/pq of 0.1028 is the largest of the analysis. Because these groups come from many walks of life, and thus possess many diverse goals and purposes, their reference criteria should be different. Their dimension by dimension comparisons are also of a different pattern than any previously examined (Table 14). The greatest similarities are on the dimensions weighted by

TABLE 14
DIMENSIONAL CONGRUENCY: WHITE NON-
CRIMINALS--BLACK NON-CRIMINALS

		Black Non-criminals	
		I	II
	I	0.7714	0.7428
White Non-criminals	II	0.8361	0.1792

Source: Author's calculations.

economic considerations, white dimension II and black dimension I. The moderate associations between two other dimensions is thought to result

from the ambivalence present in some scales for both groups (see Tables 6 and 10).

Summary: Dimensions of Evaluation

The analysis of evaluative dimensions for four groups has shown that all possess dimensions related to socio-economic status. For some groups socio-economic status and livability evaluations coincide. The white non-criminal, however, differentiates between economic considerations and attributes which stand for livability. While seeing these notions as distinctly different, he shows ambivalence in deciding which represents the good environment. The white criminal, in contrast, equates socio-economic status and livability as do both black groups.

The white criminal was found to construct a second dimension in semantic space very much unlike either white non-criminal dimension. This dimension, containing both familiarity and the perceived ease or hardness of committing a crime, appears to be related to the accomplishment of his criminal goals. The black criminal, on the other hand, relates the easiness of committing a crime to socio-economic attributes. His activity dimension, which he shares with the black non-criminal, appears to reflect short term activities. The black criminal and the black non-criminal, thus, appear to hold very similar evaluative structures, perhaps resulting from their close spatial proximity. Only the black criminal, however, construes this evaluation for criminal purposes.

Both criminal groups, therefore, share a common purpose. In

In addition, both criminal groups see the notion of familiarity as a much more interrelated concept in their evaluations of areas, which supports previous theory concerning the location of their behavior patterns. On a two dimensional solution familiarity did not emerge as a key consideration for non-criminals.

Perception of Areas

Each resident of the city views that city from a slightly different perspective. Some characteristics of the city are seen by all and others are subject to a great deal of interpretation, depending both on the characteristics of the city and the characteristics of individuals. Some city attributes such as the socio-economic attributes of an area are more objective than others, such as whether the area is good or livable. Characteristics of individuals, as discussed above, also color one's evaluation of areas. Each group, then, has a different vantage point from which to view the city. The groups analyzed in this study are relatively homogeneous in terms of age, race, and spatial location. The two criminal groups stand apart, however, in terms of their goals. They view the city from the perspective of its criminal goal satisfying power. The goals of the non-criminal group do not exhibit this internal homogeneity.

Each study area has a location in perceptual space relative to a group's evaluative dimensions. The area is weighted proportionally to its involvement with a particular dimension. The distance in perceptual space from the origin of a dimension(s) to an area is an indication of that

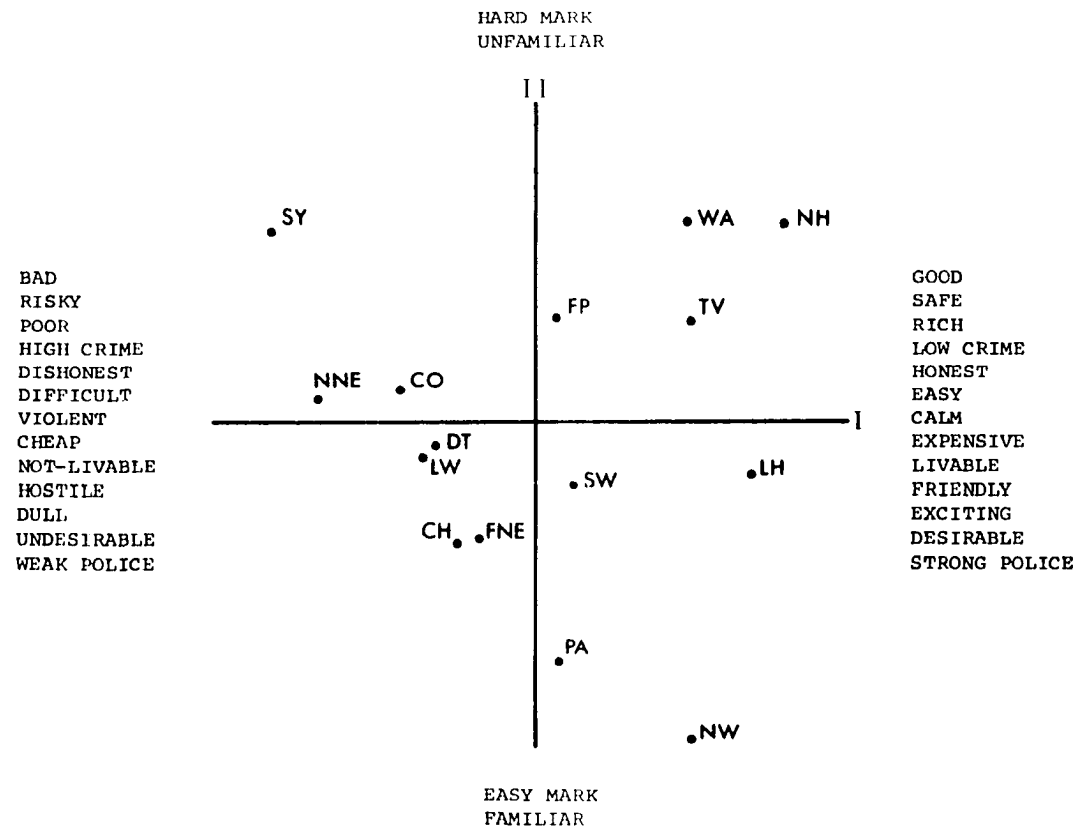
dimension's strength in defining the area, while the distances between areas are measures of their perceived similarity, the smaller the distance the more alike the areas.

The locations of the study areas for the populations of criminals and non-criminals are shown for illustrative purposes (Figures 3 and 4).¹² The internal heterogeneity within each is great. Two different races are represented plus many diverse spatial locations. The dimensional plot of each group is the average of the many different perspectives from which the city is viewed. At this point, therefore, it is more profitable to disaggregate and compare the area locations of more homogeneous groups.

Comparing the four distinct groups positioning of the study areas reveals some interesting differences and similarities (Figures 5, 6, 7, 8). Considering first the location of the upper socio-economic areas, it may be seen that not all groups view them in a similar manner. The lower income white non-criminal (Figure 6) sees Nichols Hills as extremely high in socio-economic status, but generally not livable. He recognizes that Nichols Hills is very rich but does not see it as a livable environment. In fact, he sees it as slightly bad, dishonest, and risky. The areas exhibiting positive scores on both socio-economic status and general livability are the upper middle and middle class areas such as The Village, Lake Hefner, and Warr Acres. These areas represent his positive environment.

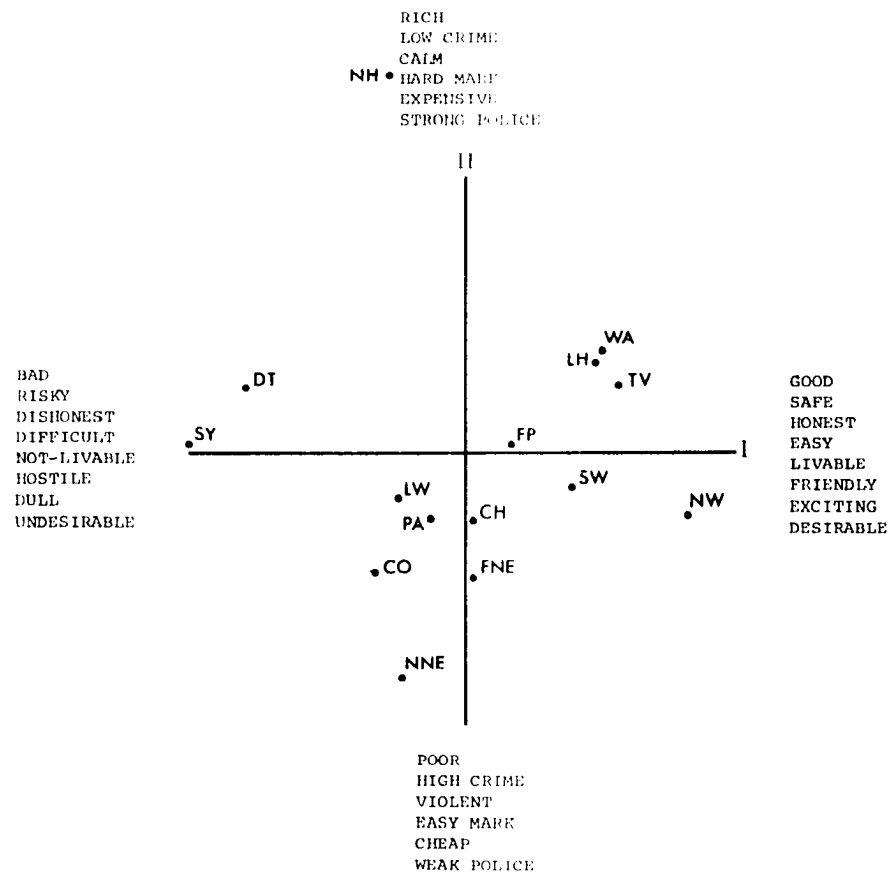
¹²Area abbreviations are shown on Map 1, page 68.

FIGURE 3
ALL CRIMINALS



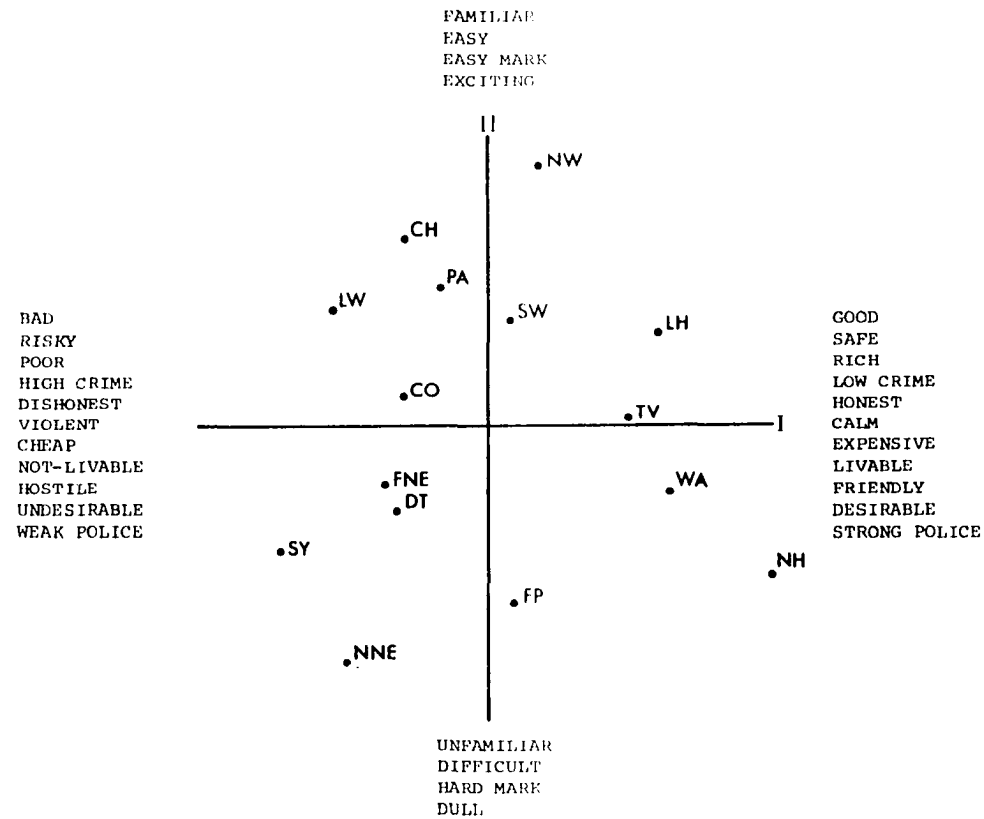
Source: Author's Computations

FIGURE 4
ALL NON CRIMINALS



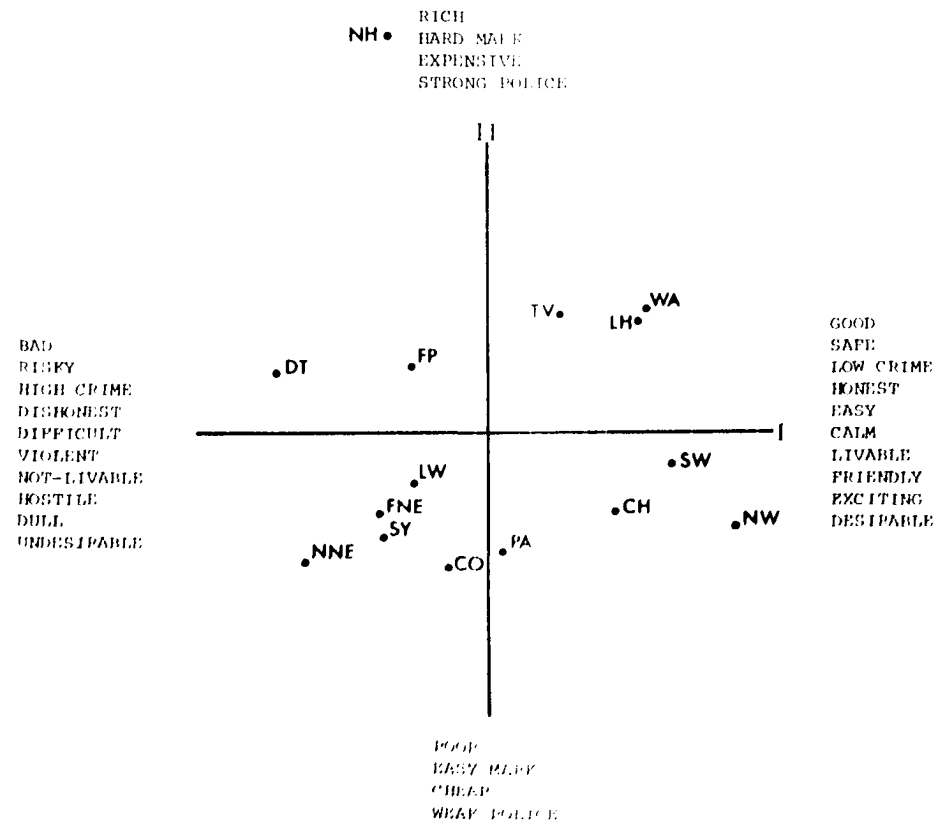
Source: Author's Computations

FIGURE 5
WHITE CRIMINALS



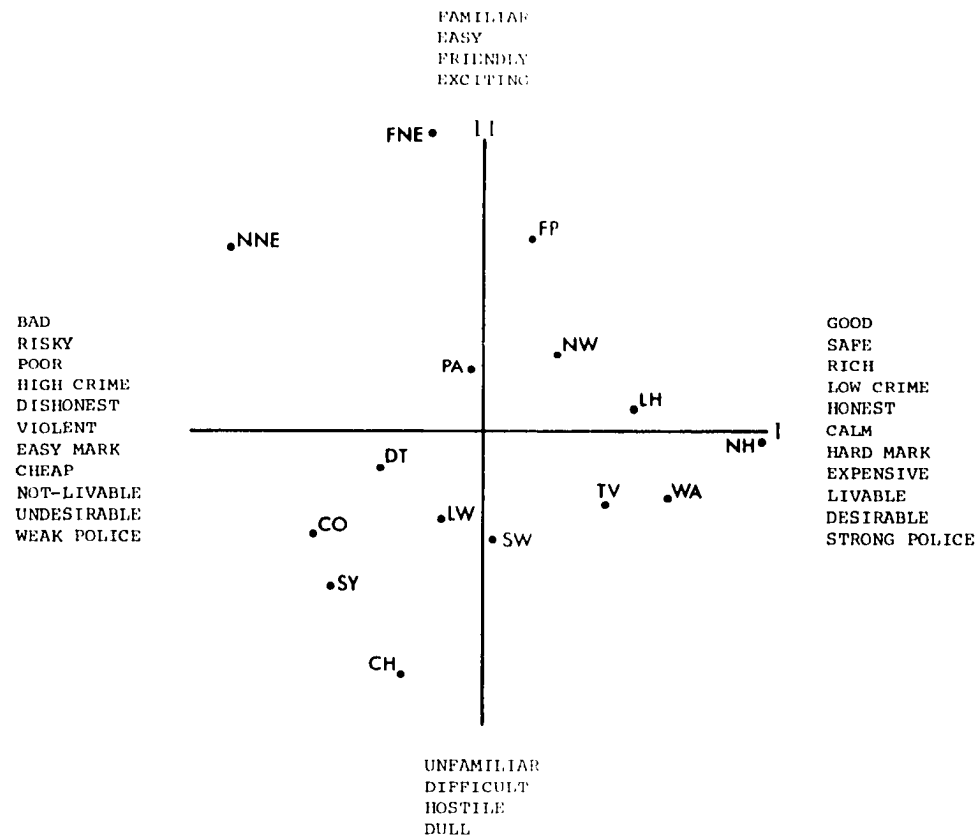
Source: Author's Computations

FIGURE 6
WHITE NON CRIMINALS



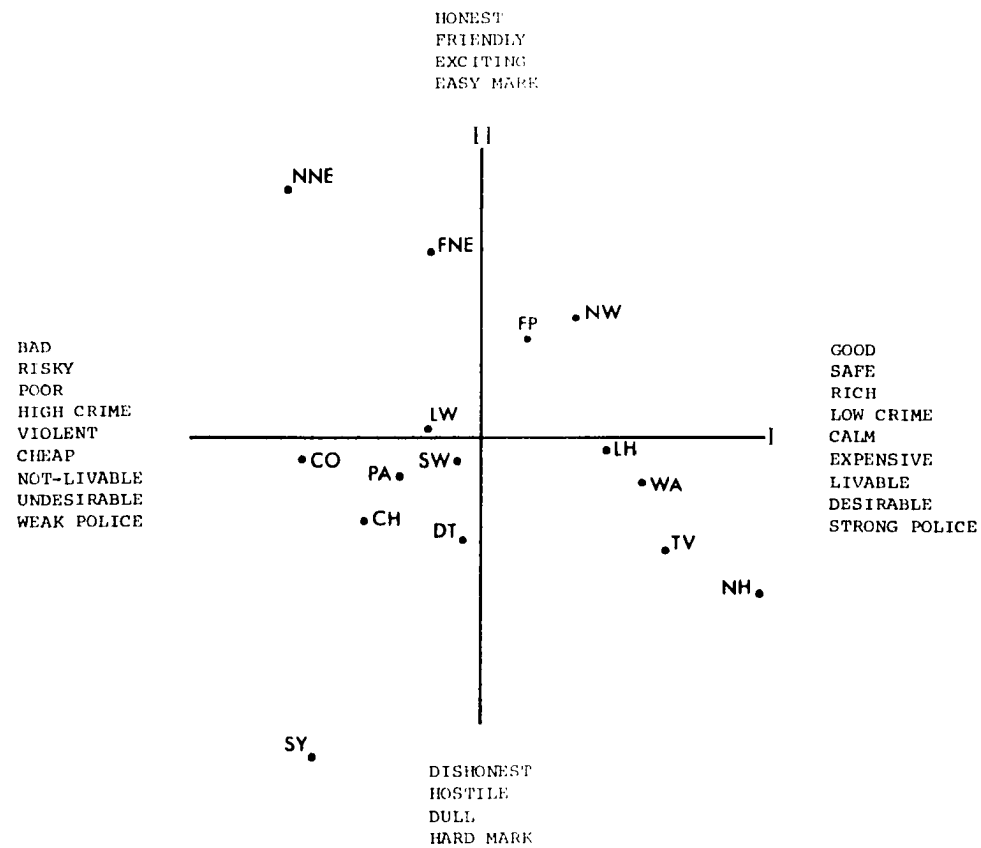
Source: Author's Computations

FIGURE 7
BLACK CRIMINALS



Author's Computations

FIGURE 8
BLACK NON CRIMINALS



Author's Computations

The lower income black non-criminal and both races of criminal, in contrast, perceive Nichols Hills to be a good, safe, livable rich area. The black non-criminal (Figure 8, page 118), however, sees the area to be hostile for him. He recognizes that the life style of Nichols Hills is good, but not for the black. The upper middle and middle income areas, The Village, Lake Hefner, and Warr Acres, are seen in a similar light but not to the extent as Nichols Hills. He knows these are the upper and middle class areas of the white. If he desires to emulate the symbols of success in the white world, these areas will accomplish the purpose. He does not, however, see the areas as his type of environment. The lower income black non-criminal appears to recognize the existence of two worlds, black and white.

The black non-criminal's positive environment is spatially more constricted than the white. He has fewer options. Only two areas, the Northwest and Forest Park, are located in the upper right quadrant. These areas are perceived to contain the best of both dimensions being both high status and generally livable. It is not surprising that these two are where most of the city's middle class blacks live. To the lower class black non-criminal, Forest Park and the Northwest seem to represent the realistically attainable environment. They are the only nice areas that enter into his activity space and as such are perceived as more inviting.

Criminals view the upper and middle income areas in a very similar manner. White criminals (Figure 5, page 115), for example,

see the areas to be good and high on socio-economic status, but generally unfamiliar hard marks for crime with strong police protection. The same general arrangement holds for black criminals (Figure 7, page 117) with minor variations. These areas would not be in the primary activity spaces of either group which may explain their unfamiliarity.

Viewing the city from the perspective of anticipated satisfaction of their goals, each race of criminal holds a different perception of certain other areas. Positive and negative valence areas for criminal goals for one race of criminal are not the same for the other race of criminal. The areas, for example, that the white criminal sees as familiar and easy marks are, among others, his home areas of Capitol Hill, Paseo, the Southwest and the Northwest. While he sees his home areas as very similar to one another on his goal directed dimension, he differentiates among them in terms of their general socio-economic status and livability. Capitol Hill and Paseo are seen as relatively poor and bad, while the Northwest and the Southwest are seen as slightly rich and good. The white non-criminal from these same areas, in contrast, sees them all to be favorable on general livability, but in varying degrees of poor. He seems to exhibit a parochial attachment to the home areas that the criminal does not entirely share.¹³

¹³Gould discovered a similar effect in studies of area preferences. Certain areas were perceived favorably only by those who lived there (Mental Maps).

Blacks do not appear to possess a parochial attachment to their home areas. While the Near Northeast and the Far Northeast are seen as friendly and exciting, they are also thought to be generally bad, poor, violent places with high crime. In other words, they exemplify in degrees all the qualities of a low socio-economic environment. Comparing the home areas to those in the lower right quadrants of both groups indicates the recognition of two separate worlds with one at the nadir of the other.

In addition to the views which he shares with his comparison group, the black criminal sees his home areas as offering potential satisfaction for his goals. He perceives the Near Northeast, however, to be especially attractive. It is a familiar easy mark with weak police protection. The Far Northeast is also seen as familiar, but a harder mark with stronger police. The distance in perceptual space from the Near Northeast to other areas reflects the constricted nature of the black's environment. The Near Northeast is relatively isolated. No area is perceived as very similar for goal satisfaction. Although the black, owing to the small size of his environment, also commits crimes in other areas, these areas are not perceived as offering as much potential satisfaction. Each area has some unfavorable attributes in terms of his goals. Some areas are seen as harder marks while others are less familiar. Unlike the white criminal, the black criminal does not perceive all of the areas that he must operate in as familiar easy marks.

For both groups of criminals, the positive valence areas where they anticipate goal satisfaction are not the same. Certain areas are

extreme negative valence areas and they are not the same for both groups. It is interesting that these extreme areas which are perceived as poor, unfamiliar hard marks are almost a mirror image of one another for each race. The black criminal does not anticipate satisfaction in the white criminal's home areas nor the white in the black's home areas. The lower left quadrant of each group's perceptual spaces contains these areas. The location of Downtown in this quadrant is the only apparent anomaly, and it is not seen as extremely unfamiliar.

Non-criminals of both races also possess a negative environment in their perceptual spaces. Although not related to criminal goals, the areas in the unfavorable quadrant of each are, with some exceptions, the other's home areas. This phenomenon suggests a very deep division of races.

Summary: Area Perceptions

The locations of the study areas in perceptual space are not the same for all groups. Several areas change locations in this space depending on the perspective from which they are viewed. Most areas which are obviously rich or poor are placed in their proper positions by all groups. Race, spatial locations and goals, however, color the interpretations given the areas. Neither race prefers the home areas of the other. For whites, non-criminals appear to be more attached to their home area than the criminals. Both groups of blacks, however, appear to recognize their home areas as generally bad.

The isolation of the Near Northeast in the black's perceptual space reflects the effects of their restricted spatial location in that it is more than physical distance that separates the area from the remainder of the city. For black criminals this implies that the area will be extremely favored for crime. In terms of satisfying criminal goals the perceptual distance from this area to most others is great.

Areas perceived as favorable to criminal goals for the white, in contrast, are located in close proximity to one another. The white's range of perceived favorable alternatives, therefore, is greater than the black. The actual behavior patterns for both groups should reflect their perceived alternatives.

CHAPTER V

FINDINGS: ASSOCIATION BETWEEN CRIMINAL BEHAVIOR PATTERNS AND ENVIRONMENTAL IMAGES

Oklahoma City used to be a bird's nest
on the ground.

--a professional burglar

Implying that times were hard and that he personally had retired from the business, an older professional burglar made the above comment during an interview session. Several much younger property felons seated around the table disagreed. "It's really all in knowing where to go and it's still relatively easy to pull a job in certain areas." Other areas, however, are strictly off limits except for the foolhardy individual, who, acting under impulse possibly brought on by narcotics addiction, will try anything. None of the offenders interviewed admitted to being the latter type.

What does the property felon consider before pulling a job? The majority of the interviewees, after the "keys" left the room, were more than willing to discuss their past behavior patterns. In their context pulling a job is like "going to work." To the geographer this analogy is extremely important, for a considerable amount of research has focused

on the spatial aspect of journey to work. Can criminal behavior be viewed as a case of this process?

"Going to Work": The Criminal Context

At the end of the formal session, criminal interviewees were asked: Do you feel that certain areas of the city are riskier for you than others? On one occasion a young white offender quickly replies,

Man . . . life's a risk. But I can tell you this . . . when I'm cruising, looking for a hit . . . there are parts of town I won't touch. I ain't going into that man's territory over there [pointing to a black man] . . . and I ain't even going to cruise Nichols Hills.

Why not? Before he could reply an older professional retorted: "I can tell you why we ain't goin' to colored town. Those guys have to make a livin' same as us . . . besides, there ain't nothin' worth stealin' over there." It was suggested that a considerable amount of crime takes place "over there." "Yes . . . but that's their territory." What if blacks came into your territory? He answered with an almost inaudible obscenity.

A black, when asked if he felt differential risk in certain parts of town, replied: "This man wants me to tell him where it's 'hot' . . . _____ man, it's hot everywhere." Does hot mean strong police protection? "Well . . . sorta, but it's more than just the bulls . . . they're everywhere." What is it then? "Well . . . I don't know . . . I just got a feeling. . . ." What kind of feeling? "I don't know." They were asked if it is the area's richness or expensiveness. "No . . . it's not quite that." Is it the poorness? "No, it's not quite that either." What is it

then? Finally they agreed that it is a lot of things, but no one thing in particular. One said, "You've got to look at the pros and cons of the situation." What are they? "I don't know . . . I just got a feeling." This response, a general feeling of awareness of area, was typical of most felons. A feeling for area, but that one cannot be specified.

The Criminal's Scale of Considerations

A "feeling," then, or environmental image of Oklahoma City was clearly acknowledged by the criminal. The vagueness of response is not unusual. In an open ended situation it is difficult for individuals to precisely identify the factors important in their image formation. Garfinkle attributes this to experiential factors. "The member of society uses background expectancies as a scheme of interpretation. With their use actual appearances are for him recognizable and intelligible as the appearances of familiar events. Demonstratably he is at a loss to tell us specifically of what the expectancies consist. When we ask him he has little or nothing to say."¹

This phenomenon was present, but to a lesser degree, when criminals were asked about their procedure in "casing" an area. Both blacks and whites experienced difficulty in describing exactly what tips them off about an area. All expressed obvious place specific considerations, such as a house that looks unattended, a store with no alarm

¹H. Garfinkle, Studies in Ethnology (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967), p. 37.

system, or a business where the attendant is thought to be unarmed. None could state, however, what it is about an area that influences their decision. Those influences which the criminal does state clearly can also be stated, however, by the law enforcement official or the average citizen. In other words, at the large scale the criminal can be specific, but so can anyone even generally aware of criminal operating procedures. The question of scale is of long standing geographical concern. Geographers have traditionally differentiated between the various scales of analysis. They recognize that at each scale of analysis variables may be called upon for explanation and that they are not necessarily the same. In terms of influences on the criminal's decision, then, at least two scales exist. Of the two, we know more about the micro scale, the selection of specific targets. Little, however, is known about the factors influencing decisions at the intra-urban scale.

Influences on the Locational Decision

Based on the model, where will the criminal commit his crime? The criminal making this decision is presented as analogous to the third level of the "simple behavior system," employing both strategy and tactics in his choice process.² Strategy is related to the intuitive feelings or images, which he cannot articulate, concerning certain areas, while tactics refer to the very short-term operational considerations of a specific crime.

² Walmsley, "The Simple Behavior System."

In other words, his overall strategy, guided by his environmental image, will be to concentrate his activities on those areas that he has a favorable "feeling" toward. Tactics, on the other hand, which derive from strategy, will guide his planning and casing of a specific location within a particular area. Current knowledge regarding the criminal's tactical aspects suggest that this is also a perceptual process, but based upon site specific cues. The physical symbols, which are provided for the non-criminal's use, are thought to be reinterpreted by the criminal for his own purposes.³ The provision of several convenient means of entry to a building, for example, would make the structure more accessible for the non-criminal. At the same time, however, it would be more accessible also to one whose purposes are not legitimate.

It is the premise of this study that smaller scale considerations of environment are of equal importance to the criminal in selecting an area. Once in the area he cruises until he observes a likely target.⁴ If he is a burglar, the favorableness of the target will depend upon several characteristics. First and foremost for the residential burglar is the presence or absence of the occupant. Second, the expected effort involved and value of the expected take will further influence the decision. For the business burglar these considerations are applicable also, but the presence or absence of an alarm system becomes critical. If present, it must be

³Letkeman, "Crime as Work," 137.

⁴Information provided by an associate about a specific target in an area would not diminish the importance of the image.

circumvented. The robber, however, faces a different set of circumstances. He must evaluate the potential victim with which he will have a confrontation--is he young and impulsive or older and more sensible. He also evaluates the expected gain and the ease of leaving the scene. The latter consideration also has its corollary at the smaller scale, but the area involved is considerably larger.

The Association Between Images and Behavior

It has been stressed throughout this report that criminal spatial behaviors are simply a special case of general spatial behavior. In the previous chapter it has been shown that some of the criminal's dimensions are very similar to the non-criminal's. For example, both possess a general dimension which appears related to general socio-economic status-general livability. Both races of criminals and the black non-criminal have a dimension related to activity patterns. Only for the criminal group, however, does the familiarity scale combine with the other scales in a two dimensional rotation. Given that the deviant's goals are criminal, the second dimension in the two dimensional configuration has been interpreted to be a goal directed dimension of image. If this is true, it should have some association with criminal behavior, i.e., patterns of crime. Moreover, its association with criminal patterns should be substantially stronger than those for any other dimension.

Other dimensions which show an association with criminal patterns may be related in a spurious manner. For a correlation between

two phenomena to denote causation, it must have a theoretical foundation. As has been discussed throughout this study, this foundation exists for a goal directed dimension of environmental images. A goal directed image, however, will not explain all of the variance in criminal patterns. Other considerations may exist which will account for the remaining portion. This other consideration may co-vary with a dimension other than the goal directed dimension causing it to be associated with behavior patterns. If this unknown influence is removed or controlled, the correlation between the non-goal directed dimensions of image and criminal patterns might be zero. This state of knowledge concerning influences on criminal patterns is not far enough advanced to specify all the influences which might be significant. If general socio-economic status--general livability is associated with behavior patterns, thus, at least two possibilities exist--one, that these considerations do to a degree influence the criminal's decision or, two, that a third force related to socio-economic status and general livability is present. Given present knowledge it is not possible to determine which explanation is valid.

Behavior Patterns

Recorded behavior patterns for the criminal sample are shown on Maps 2 and 3. The spatial distribution of offense locations for white criminals differs substantially from that of black criminals. Crimes by whites (Map 2, page 75) are concentrated primarily in the lower and lower middle income white areas which partially surround the city. These are

the same areas where most of the white criminals lived before incarceration. No crimes by whites are evident in the black areas to the northeast.

The white criminal's territory stands in marked contrast to the black criminal's (Map 3, page 76). The overwhelming majority of black criminal activities are in his home area, the Near Northeast, and the Far Northeast and Downtown. The black's distribution of recorded behavior gives an indication of his spatially constricted environment. Crimes by blacks are, however, not totally limited to predominantly black areas; some are scattered widely throughout the remainder of the city. The black, therefore, ranges farther from the comparative safety of known surroundings. The offenses which occurred within or very nearby each study area are employed to determine the association between behavior patterns and environmental images. Crimes by whites are examined in terms of the white's image and crimes by blacks are examined in terms of the black's image.

Findings--Images and Behavior

It is assumed that the individual's image exerts some influence over his behavior. The causal link, however, is not necessarily asymmetrical. Man and his environment are engaged in an on-going interactive process within which each influences the other. The "simple behavior system" begins with the environment impinging upon man. Man receives information and through a complex cognitive process makes decisions which lead to overt behavior. The order of influence assumed in the

simple behavior system is assumed also in the following discussion based on the criminal's image of his environment and his spatial behavior patterns.

White Criminals: Image and Behavior

The white criminal's mental arrangement of the study areas is depicted in Figure 9. The areas are located in relation to two dimensions composed of environmental attributes. It also should be recalled that the dimensions are the result of a constrained rotation and a third dimension exists. This third dimension is discussed in terms of its relationship as an additional contributor of explained variance in the sample's semantic space.

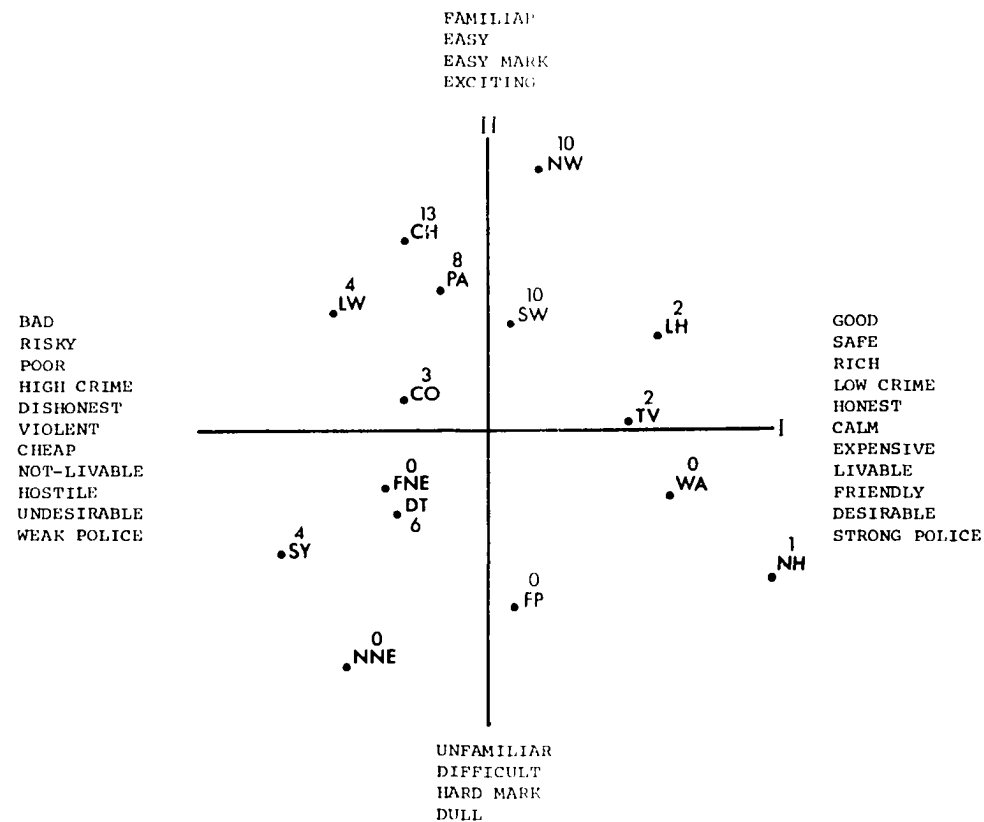
The white criminal's area plot can be thought of as a potential reaction surface, similar to the notions of Tolman.⁵ Some areas have a greater probability than others of being crime targets for this group. This surface is also analogous to Lewin's "life space" concept as some areas possess positive valence in terms of goals, while others have negative valence.⁶ According to field theory the criminal will move toward those areas where he anticipates satisfaction of his goals. Consequently some areas, those where satisfaction is achieved, will be frequented more than others. In other words, each area has a measure of subjective

⁵Tolman, Purposive Behavior in Animals and Men.

⁶Lewin, Field Theory in the Social Sciences.

FIGURE 9

CRIME FREQUENCIES: WHITE CRIMINALS



Source: Author's Computations

expected utility attached to it which influences the criminal's decision process via his perceived opportunity matrix.

According to Kelly's personal construct theory the individual evaluates his environment based upon its attributes.⁷ The area locations in terms of the dimensions is such an evaluation for white criminals. This evaluation channelizes his behavior. Some areas are evaluated favorably in relation to his goals, while others are not. Areas below the horizontal axis, for example, are not chosen to a great degree for criminal purposes. While all areas below the axis are viewed as generally unfamiliar, difficult, dull hard marks, they may be divided into two distinct groups. The first group, Forest Park, Warr Acres, and Nichols Hills, are seen as unfamiliar hard marks, but generally good, safe, rich, low crime, livable areas with strong police protection. The frequency of crime in these areas is very low, the only offense occurring on the outskirts of Nichols Hills. In the other group, the lower left quadrant, some crimes did occur in both Downtown and Stockyards. No crimes by whites, however, took place in the predominantly black areas of the Near Northeast and the Far Northeast. Stockyards and Downtown are not viewed as favorable target areas by white criminals, but then one cannot always have his "bird's nest on the ground." All areas in the lower left quadrant, however, are perceived as unfamiliar hard marks and generally poor, bad, risky, cheap not livable areas with weak police protection.

⁷ Kelly, The Psychology of Personal Constructs.

Although all are on the positive end of the goal directed dimension of image, the areas where crime occurrence is high can be split into two groups. The white criminal appears to distinguish between the nice and the not so nice areas that he commits crimes in on the basis of their general socio-economic status. He will commit crimes in all of the areas above the horizontal axis, but sees some as better than others. Two of the high crime areas, the Southwest and the Northwest, are only slightly into the better socio-economic quadrant. Those farther to the right, Lake Hefner and the Village, have lower crime frequencies. The highest crime occurrence areas for whites, Capitol Hill, Paseo, the Northwest, and the Southwest are located in close proximity to one another around the goal directed dimension. They are seen as very similar to one another in terms of criminal goals. While all areas above the horizontal axis are perceived as familiar easy marks, Capitol Hill and Paseo of the high crime cluster are seen as relatively bad, poor, high crime areas with weak police protection.

The observed crime frequencies for whites, therefore, appear to be more associated with dimension II than dimension I. This suggests that areas are discriminated among for the criminal's purposes more on the basis of familiarity and excitement, which co-varies with easy mark, than on the basis of general socio-economic status or general livability. It also suggests that the notion of risk versus reward is not sufficient explanation for criminal behavior patterns. As may be seen, some of

the highest crime frequencies are in areas considered risky and some of the highest frequencies are in areas perceived to contain moderate rewards--that is, the lower middle income areas.

Strength of Association

Correlation analysis is used to test for associations between criminal behavior patterns and image dimensions. The coefficients give measures of association for each dimension individually and crime frequencies plus a measure of total dimensional associations for two and three dimensions (Table 15). From a total variance standpoint, two dimensions explain 44.0 percent in crime frequencies, while three dimensions explain 64.7 percent.

TABLE 15
CORRELATIONS OF CRIME FREQUENCIES AND
IMAGE DIMENSIONS FOR WHITE CRIMINALS

	I	<u>Two Dimensions</u>		Total
		II		
R-Values	-0.2598	0.6109		0.6637
Explained Variance	0.0674	0.3731		0.4405
% Explained Variance	6.7	37.3		44.0
	I	<u>Three Dimensions</u>		Total
		II	III	
R-Values	-0.3030	0.4977	0.5554	0.8049
Explained Variance	0.0918	0.2477	0.3084	0.6479
% Explained Variance	9.1	24.7	30.8	64.7

Source: Author's calculations.

The results show a moderately strong association between criminal behavior patterns and environmental images on both two and three dimensional solutions. In both cases the dimension containing familiarity explains the greatest amount of total variance (37 percent and 30 percent), and thus is most associated with criminal behavior patterns. As one moves away from areas possessing high positive scores on these dimensions, crime decreases. In other words, most crimes are committed in familiar places.⁸ Boggs' suggestion is based on the ecological correlation of offender locations and offense locations, however, rather than on actual data obtained directly from criminals. It should be mentioned that even though the influence of familiarity is strong as shown by the explained variance figure for dimension III, the explained variance proportion for dimension II of the two dimension solution is greater. The dimension containing familiar, easy, easy mark, friendly and exciting, thus, exhibits the strongest association. The importance of discovering other attributes which co-vary with familiarity was the rationale for the two dimensional rotation. As familiarity decreases, the easiness of mark decreases, the less exciting it becomes and in general it is a more difficult situation for the criminal. The criminal anticipates less satisfaction for his criminal activities in those areas of his life space loading negatively on the second dimension.

⁸ Boggs, "Urban Crime Patterns."

Criminal behavior is slightly associated in a negative manner with the general socio-economic status dimension on both solutions. As mentioned above, the association may be based on actual influence exerted by these attributes of area, or a third unknown influence may be causing a spurious correlation. Speculation is that the criminal's overall evaluation of areas is slightly interwoven with the primary influences on his decision making.

An association that can be more precisely identified as spurious is the relationship between the non-criminal image and the criminal's behavior patterns--for non-criminal obviously did not commit these crimes. Table 16 shows the correlation coefficients for this association.

TABLE 16
CORRELATIONS OF CRIME FREQUENCIES AND IMAGE
DIMENSIONS FOR WHITE NON-CRIMINALS

	I	<u>Two Dimensions</u>		Total
		II		
R-Values	0.2669	0.3203		0.4167
Explained Variance	0.0712	0.1025		0.1737
% Explained Variance	7.1	10.2		17.3
	I	<u>Three Dimensions</u>		Total
		II	III	
R-Values	0.2922	0.3914	0.5597	0.7426
Explained Variance	0.0853	0.1531	0.3132	0.5516
% Explained Variance	8.5	15.3	31.3	55.1

Source: Author's calculations.

Comparing Table 15 to Table 16 it is seen that on the two dimensional solution the criminal's image is more associated with his behavior patterns than the non-criminal's image. While the non-criminal association is spurious, an important relationship emerges. The third dimension, containing familiarity, does not enter the non-criminal's two dimensional space. Although important to both groups, it is a more independent consideration in evaluating area for the white non-criminal. For the criminal it is directly linked to the perceived easiness of stealing. The criminal, thus, is perceiving the city with a different purpose in mind. He is reinterpreting common sense surroundings in light of his criminal goals.

Summary of White Criminals

The white criminal's mental image of his environment is analogous to a potential reaction surface for crime. Each area has a subjective expected utility attached to it; in this case it is in terms of satisfying a criminal goal. Of the 45 white offenders 6 had only one known offense on their record. The large majority of the sample were not first offenders so that learning about the environment probably had slowed considerably. The area locations should remain stable, therefore, until something occurs to alter the criminal's image.

The fact that the non-criminal's image is also associated with the criminal's behavior patterns does not diminish the importance of the findings. A possible reason for this association is that some area

attributes are common knowledge to all inhabitants of Oklahoma City. Only the criminal interprets this knowledge for the purposes of crime. The association between actual behavior patterns and the criminal's image, therefore, is valid. His image is a major influence on his decision to commit a crime in a particular area of the city.

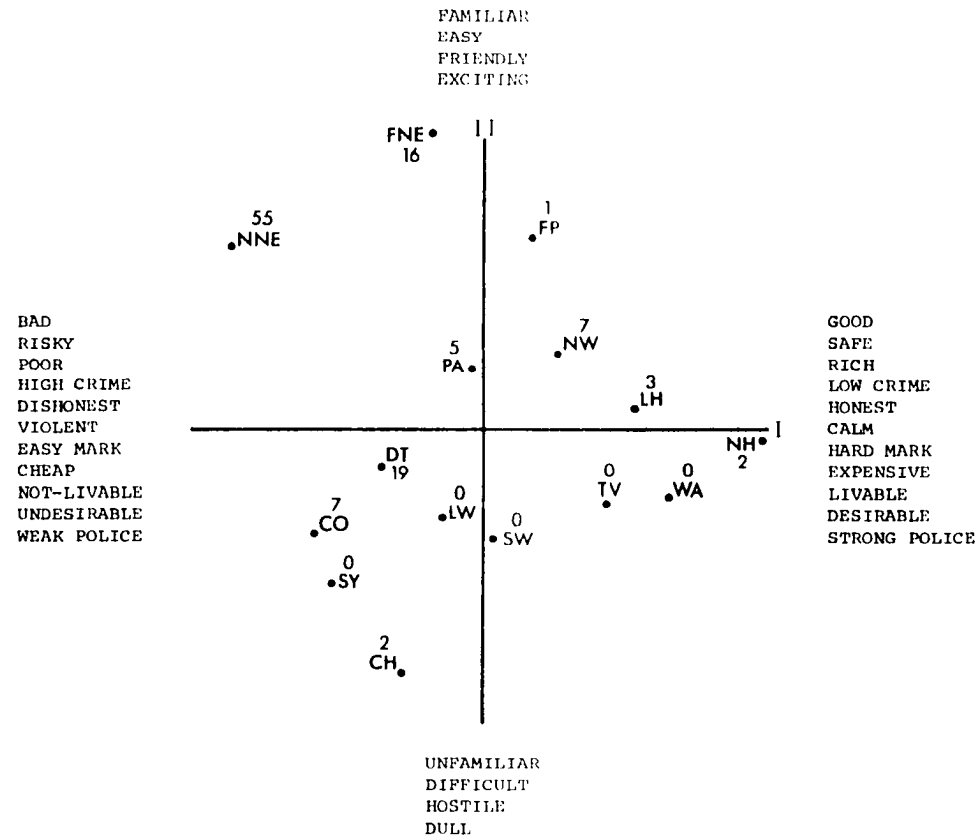
Black Criminals: Image and Behavior

The black criminal also evaluates his environment on the basis of its perceived attributes and assigns utilities to them. His dimensional plot (Figure 10) like the white criminal's is analogous to his "life space," containing both positive and negative valences. He tends to operate in areas where he anticipates satisfaction of his criminal goals. The black must sometimes venture farther out into relatively unfavorable areas and experience the accompanying hazards, one of which is that he is easily recognized. This may be observed by comparing the black's (Map 3, page 76) area frequencies to that of the whites (Map 2, page 75). Whites do not go into predominantly black areas for property crime, but blacks do go into white areas to some degree.

The combination of semantics used by blacks to define a dimension is slightly different from that of the white criminal. The major similarity is that both (on the two dimensional solutions) have dimensions which are related to their goal-activity patterns, the dimension with the strongest association with behavior for whites. The goal-activity dimensions do differ, however, in that the perceived ease or hardness of committing a crime is associated with socio-economic attributes more

FIGURE 10

CRIME FREQUENCIES: BLACK CRIMINALS



Author's Computations

so than for whites. Because of this it is expected that the association between these patterns and the image will be stronger on dimension I than is the case for white criminals.

Like the white, there are certain areas where the black will seldom commit a crime and there are others where he primarily concentrates his activities. All areas below the horizontal axis (Figure 10), for example, are perceived in varying degrees as unfamiliar, difficult, hostile, and dull. The areas are differentiated among, however, on the basis of a combination of socio-economic attributes and the perceived ease of committing a crime. Among all the areas in the lower left quadrant only two areas, Downtown and Crooked Oak, have significant amounts of crime by the black group. These areas are seen, in degrees, as slightly unfamiliar and hostile, plus bad and poor. That these two areas are frequented by blacks may be explained by the aforementioned consideration that they have to sometimes search for opportunities outside normally utilized crime areas.

The primary offense area for the black criminal is the Near Northeast. This is also the home area for the majority of the sample. The black criminal sees the Near Northeast to be directly between and relatively far out on both the lower end of the socio-economic status dimension and the goal-activity dimension. As such, it is a familiar, friendly and exciting place, but a poor, risky, easy mark for crime. The Far Northeast and Paseo are also located in this quadrant, but relative to the Near North-

east, they experience far fewer crimes. They are familiar and friendly, but much harder marks. The areas in the upper right quadrant are perceived as still harder marks, but some crime did occur, especially in the Northwest.

Strength of Association

Table 17 depicts the association between criminal behavior patterns and environmental images for black criminals. Two dimensions of the black's image explain 56.9 percent of the variance in their behavior pattern while three dimensions explain 75.0 percent.

TABLE 17
CORRELATIONS OF CRIME FREQUENCIES AND
IMAGE DIMENSIONS FOR BLACK CRIMINALS

	<u>Two Dimensions</u>			
	I	II	Total	
R-Values	-0.5648	0.5004	0.7545	
Explained Variance	0.3189	0.2504	0.5693	
% Explained Variance	31.8	25.0	56.9	
	<u>Three Dimensions</u>			
	I	II	III	Total
R-Values	-0.4659	-0.1241	0.7200	0.8664
Explained Variance	0.2170	0.0154	0.5184	0.7508
% Explained Variance	21.7	1.5	51.8	75.0

Source: Author's calculations.

It is significant that a dimension (III) composed of familiar and exciting explains over one-half of the variance in the black criminal's behavior patterns, particularly when compared to the white case. It was mentioned in the preceding chapter that the black sample probably experienced more difficulty from the reduced rotation than the white sample. The truth of that contention is evident. Although both familiar and exciting join dimension II, only a small amount of additional information is gained. A two dimensional solution, however, that explains over one-half of the variance in the black criminal's behavior patterns is notable.

It is not appropriate to discuss only one dimension of the two dimensional solution as being important to black criminals. Both dimensions contribute almost equally and reflect the attributes which loaded on them. On dimension I the scale easy mark-hard mark combined with general socio-economic status exerts the most influence. On dimension II, familiar, exciting, and friendly have the highest loadings. The interpretation, as for whites, is that as one moves away from the areas in the upper left quadrant, crimes by blacks decrease. One area located in this quadrant, the Near Northeast, has the greatest magnitude of crime and reflects the spatially constricted nature of the black's environment. True, some are forced to range widely in their criminal activities, but the overwhelming proportion of crime is concentrated in an area perceived as a familiar, exciting, easy mark. One might speculate, then, with some measure of validity, that if blacks are forced to live in a

spatially confined area, these areas will experience phenomenally high crime occurrence.

The black non-criminal image, unlike non-white criminals, is also strongly associated with crime patterns (Table 18). The reason for this seems clear. Here again the influence of blacks being concentrated in a small area emerges. The black non-criminal, it will be recalled, shares a very similar environmental image to the black criminal. Both weight dimensions of their images with socio-economic considerations. Both, by necessity, share the same primary activity space, but only the criminal interprets this space for criminal purposes.

TABLE 18
CORRELATIONS OF CRIME FREQUENCIES AND IMAGE
DIMENSIONS FOR BLACK NON-CRIMINALS

	<u>Two Dimensions</u>			
	I	II	Total	
R-Values	-0.4202	0.5389	0.6833	
Explained Variance	0.1765	0.2904	0.4669	
% Explained Variance	17.6	29.0	46.6	
	<u>Three Dimensions</u>			
	I	II	III	Total
R-Values	-0.2815	0.5909	-0.5948	0.8843
Explained Variance	0.0792	0.3491	0.3537	0.7820
% Explained Variance	7.9	34.9	35.3	78.2

Source: Author's calculations.

Comparing the non-criminal to the criminal reveals that while the non-criminal's three dimensional solution explains more total variance in the criminal's patterns, the influence of familiarity is not as strong. For criminals, two scales, familiar and exciting, explain over 50 percent of the actual behavior patterns. These environmental attributes, therefore, must be critical in his decision process. This third dimension may be necessary to differentiate between black criminals and non-black criminals, in addition to being the black criminal's goal directed dimension. While he may perceive the easiness of the mark to be highly related to socio-economic status, familiarity and excitement guide his decision. The black non-criminal's three dimensional structure, in terms of explained variance, is partitioned more equally between the familiarity dimension and the one containing excitement. The criminal sees these attributes as nearly the same.

Summary of Black Criminals

The black criminal's mental image of his environment, as for whites, is a potential reaction surface for criminal activities. However, the configuration of the surface is different. This, in part, reflects the territoriality notion that the old professional mentioned as well as a basic division between races. One thing is certain, the black criminal does move toward the regions of his life space where he anticipates satisfaction in terms of his goals. In addition, he is forced by the restricted size of his territory to seek marks elsewhere--some of which he perceives as

unfavorable for crime. Because of this, one would speculate that his chance of apprehension is greater outside of the northeast side of the city. His ability to blend into the surroundings following a crime is severely curtailed.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This research has considered the association between a criminal's spatial behavior and his environmental image. Interest has focused on characterizing the ways different sub-populations, criminal and non-criminal perceive areas of a city, and whether the criminal's images are associated with recorded criminal behavior. The research was exploratory for little theory exists on this type of problem. Consequently, no clear cut answers to many of the problems raised by the research were obtained. Quite the contrary, more new questions were raised than old ones answered.

While much is known concerning the very short range tactical considerations of the criminal such as how he selects a specific site, little is known about the criminal's image of the city and how it guides his decisions on strategy. Strategy refers to the criminal's overall evaluation of areas. Knowing the criminal's strategy is equally important to knowledge of his tactics. This problem was approached by a series of propositions that related to two major questions. First, is the property offender's spatial behavior related to his environmental image of the city, and second, do criminals and non-criminals have different images?

Summary

The answer to the first question is relatively clear. The second, however, is much more complex. Criminals and non-criminals were found to exhibit both similarities and differences in the structure of their evaluative dimensions and on their perception of areas in terms of these structures.

In terms of similarities, all groups were found to possess evaluative dimensions relating to socio-economic status and livability. White non-criminals did, however, differentiate between economic status and general livability, showing ambivalence concerning which should include his evaluation of the goodness of environments. White criminals and both groups of blacks saw attributes defining both notions to be highly related. These three groups, especially the criminal samples, equated rich and expensive with livable, safe, calm, desirable and good. When evaluating area, these notions were interwoven into a single dimension. The black non-criminal, while being very similar to the criminal groups in terms of this evaluation, showed ambivalence concerning livability. Although the specific scale "livable" had its strongest loading on dimension I, it had a moderate loading on the dimension constructed in part from friendly, honest, and exciting. When evaluating environments, then, the black non-criminal associated livability with different environmental attributes.

The notion of familiarity played a key role in the environmental

evaluative structures for both criminal groups. Based on the conjectures of prior research, familiarity was thought to be associated with the criminal's evaluation of the attractiveness of an area for illegitimate goal satisfaction. The white criminal was found to have a single dimension which appeared related to his criminal goals. To him the perceived ease of stealing co-varied with the notions of familiarity and excitement. In other words, places that were unfamiliar were also dull and harder from which to steal.

The black criminal, in contrast, related the easiness of accomplishing his criminal purposes more to the socio-economic dimension. He perceived less difficulty in the poorer areas and more difficulty in the higher status areas. The black criminal, as the white criminal, placed familiar and exciting on a separate dimension from his evaluation of socio-economic status and livability. However, he weighted his evaluation of potential targets with attributes from both dimensions. The black non-criminal held an evaluative structure very similar to the black criminal. This contrasts with the poor fit between white groups. The mental construction of both black groups shared a great deal of commonality in terms of the attributes which define socio-economic status. In addition, they were similar on a dimension which appeared related to their activity patterns. The explanation was thought to be a function of their constricted spatial location within the city. They do not, however, share the same goals. The black criminal's interpretation of his environment for illegitimate purposes differentiates him from the black non-criminal.

Additional similarities and differences were discovered in the location of neighborhoods relative to the groups' dimensions. While the white criminal and both black groups placed the upper and middle income areas high on socio-economic status and livability, the white non-criminal excluded Nichols Hills from the cluster. Nichols Hills was seen by the white non-criminal to be high on his socio-economic status dimension, but low on his livability dimension. In fact, he perceived the area to be slightly bad and risky. The remaining three groups appeared to recognize that upper and middle income areas represent the good life, a life in which they do not share.

Black criminals and non-criminals had similar perceptions of their home area, the Near Northeast. Both groups saw it as friendly and exciting, but generally poor, low status, and not livable. To the black, the Near Northeast was relatively isolated in perceptual space. The closest area in this psychological space was the other predominantly black area, the Far Northeast. Both areas were seen by the criminal as relatively easy marks. The isolation in perceptual space of the Near Northeast, in addition to its perception as an easy mark, suggested that the black criminal would concentrate the overwhelming majority of his crimes there. Because of the limited size of his home areas, however, he perceived some other areas to be relatively easy marks but not as familiar and others to be more familiar but harder in which to accomplish his purposes.

The white groups, in contrast, did not share similar views of their home areas. White non-criminals exhibited a parochial effect in the ordering of areas. The white criminal did not have such a perspective. The non-criminal viewed his home areas as relatively poor, but in general livable, friendly places. The criminal, on the other hand, perceived two areas--Capitol Hill and Paseo--as bad and poor, and two others--the Southwest and the Northwest--as good and relatively rich.

In terms of their goals, both criminal groups had positive and negative areas. They were not, however, the same. For example, each criminal sample had a well defined territory. Neither group, however, perceived the home areas of the other group to hold anticipated satisfaction for goals. The white criminal isolated the black home area in perceptual space. The blacks did the same to the white home area, although not to the extent exhibited by the white criminal population.

Criminal behavior patterns were discovered to be related to their image of the city. The analysis was conducted by examining the association between white criminal behavior and white images and between black criminal behavior patterns and black images.

White criminal behavior patterns were found to be highly associated with his goal directed dimension of image. The areas with high positive scores on this dimension experienced more crime by whites than areas with smaller or negative scores. On both two and three dimensional solutions, the dimensions containing familiarity exhibited

the highest association. Criminal behavior had a slight negative association with the general socio-economic status dimension. This type of association reflected a basic problem in interpretation of dimensional relationships. It is a well recognized fact that crime is most prevalent in lower income, socially disorganized neighborhoods. Since a socio-economic dimension was an important aspect of each group's evaluation and since the evaluation of areas was based on this criterion, it was not surprising that criminal patterns and socio-economic status had a moderate level of association. This type of spurious correlation constituted a major problem in attempting to relate images to behavior.

The above problem was manifested in that the white non-criminal's image was associated also with criminal behavior patterns, but to a much smaller degree. The reason suggested for this spurious association is that some area attributes are common knowledge to all inhabitants of Oklahoma City. Only the criminal, however, interprets this knowledge for the purposes of crime. The association between actual behavior patterns and the criminal's image, therefore, was thought to be valid.

The black criminal's behavior patterns were strongly associated with both image dimensions of the two dimensional solution. His decision to commit a crime at a place, therefore, was influenced both by familiarity and excitement, and socio-economic status considerations. In areas with negative scores on socio-economic status and positive scores on the dimension containing familiarity and excitement, crime by blacks

was high. The Near Northeast possesses the above characteristics more so than any other area. It is a considerable distance in perceptual space from this area to any other. It was not surprising, then, that the Near Northeast experienced almost three times the crime as any other location.

An association was also found between the black non-criminal's image and the black criminal's behavior patterns. In fact, on three dimensions the total association was stronger than that for criminals.¹ This association was thought to derive from blacks living in a spatially constricted area. The black non-criminal shared a very similar environmental image to the black criminal. Both weighted dimensions of their image with socio-economic considerations. Both also shared the same primary activity space. Their day to day lives are interwoven in a small area of the city, consequently both see the socio-economic considerations that influence the criminal's decision as unidimensional.

Conclusions

The criminal's mental arrangement for the study areas is analogous to a potential reaction surface for his criminal goals. Areas on this surface contain expected utility ranging from extreme to practically no utility. This finding verifies the contentions of several ecological studies which have suggested that property offenders perceive some areas

¹On both solutions, however, the criminal dimension containing familiarity explained the greater amount of variance in behavior patterns.

of the city as more attractive for their activities than others. Perceptual distance between areas containing varying amounts of utility for the criminal groups also is thought to be a key consideration in explaining areal crime frequencies. Those areas at some distance from a favored area of operation contain fewer of the characteristics thought conducive to criminal decision making. Areas nearby in perceptual space may be substituted for one another in terms of expected satisfaction of a criminal goal.

Familiarity plays a much greater role in the criminal's evaluation of area than it does for non-criminals. This conclusion is consistent with Boggs who speculated that familiarity with potential targets may explain a great deal of the patterning of urban property crime.² Conclusions such as this are often taken for granted when in reality they are the least obvious to those concerned with crime prevention. Simple concepts are sometimes much more powerful explainers of phenomena than the most complicated constructions brought to bear on the problem.

The findings of this research tend to support the concept implicit in the simple behavior system. The criminal's behavior patterns are clearly associated with his environmental image. Non-criminals, however, have very similar images in some respects. It appears, then, that criminal spatial behavior is simply a subset of general spatial behavior. The criminal merely reinterprets the environment, via very similar evaluative processes to the non-criminal, to suit his particular illegitimate goals.

²Boggs, "Urban Crime Patterns."

APPENDIX I

AREA PROFILES

AREA PROFILES

The study area (see Map 1, page 68) exhibits wide variations in both socio-economic characteristics and crime rates. It was mentioned in Chapter III that crime rates are subject to a variety of weaknesses from the standpoint of the validity of police statistics and the selection of the appropriate base denominator. The two rates that have been employed most frequently in geographical studies are crime/square mile (rate 1) and crime/population/square mile (rate 2). Downey and Hunt factor analyzed the two rates and with slight variations obtained very similar results.¹ These rates are used here to allow the reader to receive at least an approximation of the amount of aggregate crime in each area. A brief general profile of each area study follows.

1. Nichols Hills--This area, located about four and one-half miles north of the CBD, is the most exclusive (both socially and economically) section of the city. It is primarily a residential area for the upper income white and contains relatively few business establishments. Politically, it is not a part of Oklahoma City but is a separately incorporated enclave with its own municipal services. Most notable among these city services is the Nichols Hills Police Department. It has the reputation of being extremely competent in carrying out its duties of providing security for the area. While the exact influence of police as a crime deterrent is not known, Nichols Hills does have a very small amount of property crime. Using method one their crime rate is 57.0. Employing rate two yields .011.

2. The Far Northeast--The Far Northeast is a racially mixed, middle income residential neighborhood. Although a number of upper income whites reside here, it is also an area for the middle income black who is experiencing upward social mobility. It is located only a mile or so from the heart of the lower income black area. The Far Northeast's crime rate is relatively high on both scales. The amount of crime per square mile (rate 1) is 245.5. When population (rate 2) is considered it remains high--.044.

3. Capitol Hill--Located about one and one-half miles directly south of the CBD is Capitol Hill, primarily composed of lower and lower middle income whites. It has a sizable business district and a wide range of municipal services, but not its own police force. Crime is high in Capitol Hill as indicated by rate 1 (319.5) and rate 2 (0.47).

¹Downey and Hunt, "The Spatial Structure of Intra-urban Criminal Behavior."

4. Linwood--Linwood is immediately west of downtown. It is predominantly a lower income white area, but contains quite a number of American Indians. Some commercial activities are included in this section but most are undergoing physical deterioration. Linwood's crime rate is high on both scales 409 (1) and .088 (2).

5. Northwest--Located approximately two and one-half miles north west of the CBD; lower middle income whites are the principal occupants of this area. Within the area is a major regional shopping center, Shephard Mall, and several schools. Crime in the Northwest is relatively high--253 (1) and .023 (2).

6. Downtown--This is Oklahoma City's central business district. In addition, lower classes of several ethnic groups reside here. Like other downtowns, crime is extremely high relative to area (988.3) and to population and area (.240). In terms of the number of opportunities for crime, however, the rate may be somewhat lower. Unfortunately, the number of opportunities is unknown.

7. Warr Acres--Warr Acres is predominantly middle income and white. Located about five miles northwest of downtown Oklahoma City, like Nichols Hills, it is an incorporated enclave with its own services, including a police force. Warr Acres police have the reputation of being exceptionally "tough" on offenders. The effectiveness of this policy is unknown, but Warr Acres does have only a moderate crime rate, 190.8 (1) and .018 (2).

8. Forest Park--This area is situated approximately four miles northeast of downtown. It is a racially mixed middle and upper middle income neighborhood. Forest Park is also an incorporated enclave within the city limits of Oklahoma City and provides its own police force. Crime in Forest Park is the lowest of any study area, 4.6 (1) and .004 (2).

9. Lake Hefner--Situated on the southeast shore of Lake Hefner, the neighborhood is a middle income white area, approximately four and one-half miles northwest of downtown. Lake Hefner's crime rate is low on both scales, 64.5 (1) and .011 (2).

10. Paseo--The Paseo District is about one and one-half miles north of downtown. The area formerly served as one of the upper income residential neighborhoods of the city, but over recent years it has experienced considerable physical deterioration. The most noteworthy aspect of the area presently is that it serves as home for a large portion of the "hippy" element. Paseo has one of the highest crime rates in the city, 349 (1) and .059 (2).

11. Southwest--This area, chosen to typify the southwest portion of Oklahoma City, is located approximately three miles southwest of the CBD. Like much of the southwest, it is a lower middle to middle income section, with a fair amount of strip business development. Crime in the Southwest is relatively high, 245 (1) and .032 (2).

12. The Village--The Village is located immediately north of Nichols Hills, approximately five miles north of downtown. It is a middle to upper middle income white suburb that is separately incorporated. The Village Police are noted for their efficiency, but not as much so as the Nichols Hills Police. The crime rate in the Village, while being relatively low (113.3 and .007), is higher area-wise than Nichols Hills, but lower on rate 2.

13. Crooked Oak--Crooked Oak is located about three and one-half miles southeast of downtown. It is predominantly a lower income white section and is known to be a "rough place." Crime is relatively high in this area, 272 (1) and .037 (2).

14. Stockyards--Also known as "packing town," Stockyards is primarily a lower income white residential, business, and industrial area. It is located approximately one and one-half miles southwest of downtown and contains the Oklahoma City Stockyards. The Stockyards section has a moderate crime rate, 157 (1) and .047 (2).

15. Near Northeast--The Near Northeast is approximately one and one-half miles northeast of downtown. Immediately east of the state capitol complex, this area is the heart of the lower income black business and residential community. Crime is high here, 401.5 (1) and .030 (2).

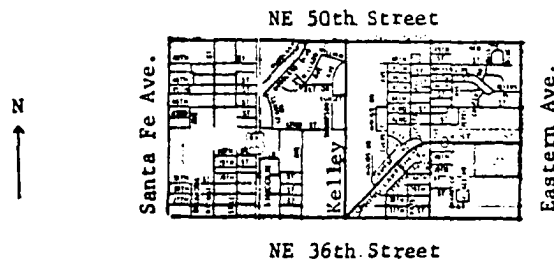
APPENDIX II

THE QUESTIONNAIRE

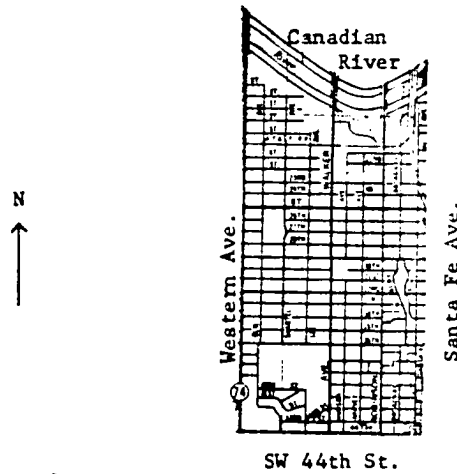
NICHOLS HILLS

FAR NORTHEAST OKLAHOMA CITY

This area is located approximately three and one half miles northeast of downtown. Spring Lake Amusement Park is located in the eastern edge of the area.

[illegible]

CAPITOL HILL

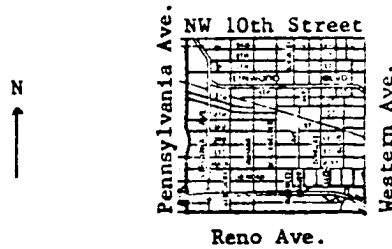


This area is located approximately one and onehalf miles straight south of downtown Oklahoma City.

[illegible]

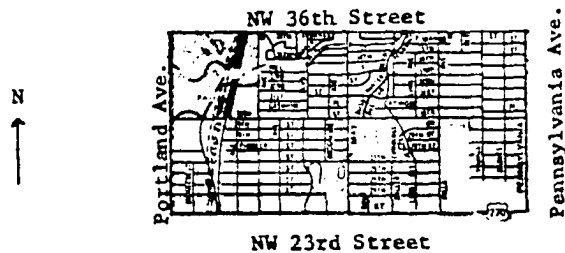
LINWOOD

This area is located just west of downtown.

[illegible]

NORTHWEST OKLAHOMA CITY

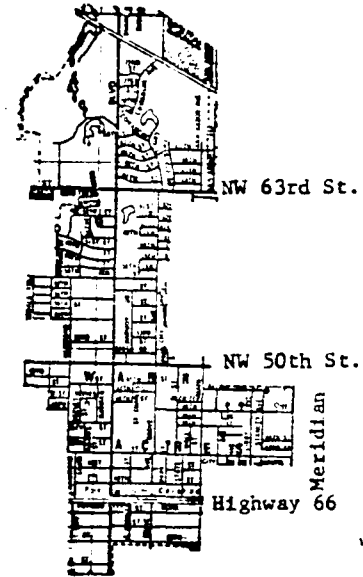
This area is located approximately two and one half miles northwest of downtown. Located within this area are Shepherd Mall shopping center and Northwest Classen High School.



	Extremely	Very	Slightly	Neutral	Slightly	Very	Extremely	
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Familiar	_____	_____	_____	_____	_____	_____	_____	Unfamiliar
Risky	_____	_____	_____	_____	_____	_____	_____	Safe
Rich	_____	_____	_____	_____	_____	_____	_____	Poor
Low Property Crime	_____	_____	_____	_____	_____	_____	_____	High Property Crime
Honest	_____	_____	_____	_____	_____	_____	_____	Dishonest
Difficult	_____	_____	_____	_____	_____	_____	_____	Easy
Calm	_____	_____	_____	_____	_____	_____	_____	Violent
Easy Mark	_____	_____	_____	_____	_____	_____	_____	Hard Mark
Cheap	_____	_____	_____	_____	_____	_____	_____	Expensive
Livable	_____	_____	_____	_____	_____	_____	_____	Not-Livable
Hostile	_____	_____	_____	_____	_____	_____	_____	Friendly
Exciting	_____	_____	_____	_____	_____	_____	_____	Dull
Undesirable	_____	_____	_____	_____	_____	_____	_____	Desirable
Strong Police Protection	_____	_____	_____	_____	_____	_____	_____	Weak Police Protection

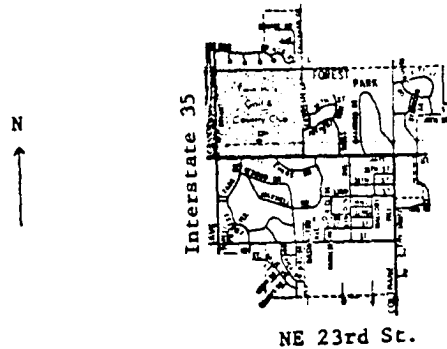
WARR ACRES

This area is located approximately five miles northwest of downtown.

[illegible]

FOREST PARK

This area is located on the east side of Interstate Highway 35 approximately four miles northeast of downtown.



	Extremely	Very	Slightly	Neutral	Slightly	Very	Extremely	
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Familiar	_____	_____	_____	_____	_____	_____	_____	Unfamiliar
Risky	_____	_____	_____	_____	_____	_____	_____	Safe
Rich	_____	_____	_____	_____	_____	_____	_____	Poor
Low Property Crime	_____	_____	_____	_____	_____	_____	_____	High Property Crime
Honest	_____	_____	_____	_____	_____	_____	_____	Dishonest
Difficult	_____	_____	_____	_____	_____	_____	_____	Easy
Calm	_____	_____	_____	_____	_____	_____	_____	Violent
Easy Mark	_____	_____	_____	_____	_____	_____	_____	Hard Mark
Cheap	_____	_____	_____	_____	_____	_____	_____	Expensive
Livable	_____	_____	_____	_____	_____	_____	_____	Not-Livable
Hostile	_____	_____	_____	_____	_____	_____	_____	Friendly
Exciting	_____	_____	_____	_____	_____	_____	_____	Dull
Undesirable	_____	_____	_____	_____	_____	_____	_____	Desirable
Strong Police Protection	_____	_____	_____	_____	_____	_____	_____	Weak Police Protection

Meridian Ave.

N. 63rd Street

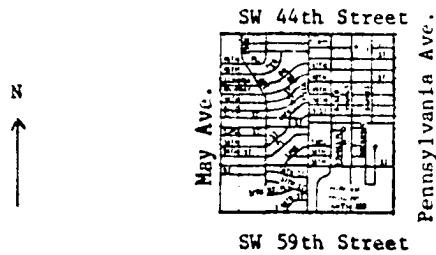
May Ave.

[illegible]

[illegible][illegible]

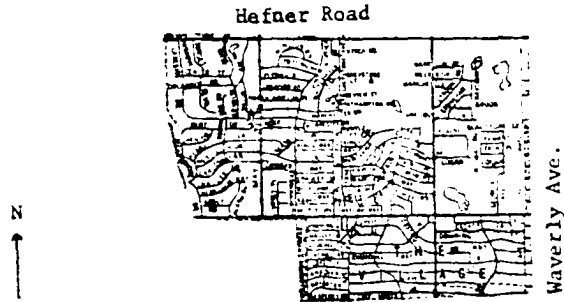
SOUTHWEST OKLAHOMA CITY

This area is located approximately three miles southwest of downtown. Hillcrest Hospital is within the area.

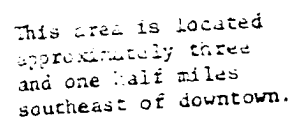
[illegible]

THE VILLAGE

The Village is located in northern Oklahoma City approximately five miles from downtown.



	Extremely	Very	Slightly	Neutral	Slightly	Very	Extremely	
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Familiar	_____	_____	_____	_____	_____	_____	_____	Unfamiliar
Risky	_____	_____	_____	_____	_____	_____	_____	Safe
Rich	_____	_____	_____	_____	_____	_____	_____	Poor
Low Property Crime	_____	_____	_____	_____	_____	_____	_____	High Property Crime
Honest	_____	_____	_____	_____	_____	_____	_____	Dishonest
Difficult	_____	_____	_____	_____	_____	_____	_____	Easy
Calm	_____	_____	_____	_____	_____	_____	_____	Violent
Easy Mark	_____	_____	_____	_____	_____	_____	_____	Hard Mark
Cheap	_____	_____	_____	_____	_____	_____	_____	Expensive
Livable	_____	_____	_____	_____	_____	_____	_____	Not-Livable
Hostile	_____	_____	_____	_____	_____	_____	_____	Friendly
Exciting	_____	_____	_____	_____	_____	_____	_____	Dull
Undesirable	_____	_____	_____	_____	_____	_____	_____	Desirable
Strong Police Protection	_____	_____	_____	_____	_____	_____	_____	Weak Police Protection

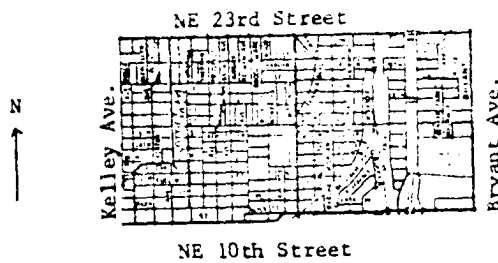


	Extremely	Very	Slightly	Neutral	Slightly	Very	Extremely	
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Familiar	_____	_____	_____	_____	_____	_____	_____	Unfamiliar
Risky	_____	_____	_____	_____	_____	_____	_____	Safe
Rich	_____	_____	_____	_____	_____	_____	_____	Poor
Low Property Crime	_____	_____	_____	_____	_____	_____	_____	High Property Crime
Honest	_____	_____	_____	_____	_____	_____	_____	Dishonest
Difficult	_____	_____	_____	_____	_____	_____	_____	Easy
Calm	_____	_____	_____	_____	_____	_____	_____	Violent
Easy Mark	_____	_____	_____	_____	_____	_____	_____	Hard Mark
Cheap	_____	_____	_____	_____	_____	_____	_____	Expensive
Livable	_____	_____	_____	_____	_____	_____	_____	Not-Livable
Hostile	_____	_____	_____	_____	_____	_____	_____	Friendly
Exciting	_____	_____	_____	_____	_____	_____	_____	Dull
Undesirable	_____	_____	_____	_____	_____	_____	_____	Desirable
Strong Police Protection	_____	_____	_____	_____	_____	_____	_____	Weak Police Protection

[illegible]

NEAR NORTHEAST OKLAHOMA CITY

This area is also known as "The Northeast Side". It is located approximately one and one half miles northeast of downtown. This is the area that lies just east of the State Capitol complex.

[illegible]

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